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The Western Atlantic Marine Mollusks Described By C. B. Adams

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This present study includes the marine species described by C. B. Adams from the Western Atlantic. His original descriptions are given exactly as he published them along with any of his pertinent remarks concerning the various species described. No attempt is made to bring his species "up to date" other than the very few that have been considered in *Johnsonia* and the work on *Vitrinella* done by Pilsbry. However, we have appended after each species concerned the notes published by H. Krebs in 1866. Henry Krebs had paid a visit to Amherst prior to this time to see the Adams collection and his notes add material value to an understanding of a few of the species no longer existing in the Adams collection. To modernize the many species described by Adams would call for a complete revision of several genera and in certain cases, whole families, a task far beyond the scope of this report.

The purpose of this report is to put on record the material that Adams described but rarely figured. His collection, which was at Amherst College for nearly ninety years, was deposited in the Museum of Comparative Zoölogy in 1942.

The collection had suffered but little during the long years at Amherst. This in itself is remarkable as throughout that long period those responsible for its care may have had little interest in it. There are many cases on record of valuable collections, bequeathed to various institutions, that have deteriorated or even entirely disappeared.

A few types, particularly very small specimens, have been lost. Their exact number will not be known until the last report of his many species has been worked up. This loss was due mainly to a peculiar defect in housing the collection. Small specimens were kept in long glass vials, generally with a rather loose plug of long fibered cotton. These vials were for the most part free in the drawers. Any movement of the drawers would cause the vials to roll back and forth. Cotton plugs of vials with opposing apertures would become entangled and in time the weaker plug was pulled out. Minute shells were thus readily lost in the dust and through cracks in the drawers.

A few genera, such as *Eulima* (=*Melanella*) and *Chemnitzia* (=*Turbonilla*) are completely lacking. These may have been loaned to others and never returned. No records remain to indicate their whereabouts nor are there the usual labels and empty vials which exist for the few lots of known "lost" material.

The proper evaluation of the work of C. B. Adams in the field of mollusks is most difficult. In the short space of 15 years he described about 800 species. His early work on New England mollusks was carefully done and the species described were, for the most part, well figured. At the time of his visits to Jamaica, comparatively little was known about the astonishing richness of the West Indian mollusks. Though much material had reached Europe, it had been collected mainly by persons interested in other fields and locality data were both limited and, in many cases, incorrect. This, of course, complicated his earlier studies of the Jamaican marine mollusks. In addition, the highly localized nature of the land snail fauna and, in general, the lack of extreme variation among most of the colonial elements of this fauna, probably influenced his point of view regarding the marine species that he described. At least, he separated many of his marine forms on very trivial characters, which even today would be held as falling within a normal variation curve.

Adams realized early that the task ahead was a tremendous one, a task that would take many years to finish. As a consequence, he issued his descriptions of new species briefly with few or no figures. This procedure he considered a preliminary one; at a later date a complete monograph of the land, fresh-

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1814–1853

Plate 28. Copied from the American Geologist, 1903, 32, Plate 1.

water and marine shells he had described was to be issued. His premature death in St. Thomas left only the preliminary work behind him. This type of work has been most unfortunate as it has added many difficulties to the study of this complex fauna. Even at this date, many of Adams' species remain completely unknown.

Realizing that a large monograph would be a very costly undertaking, Adams decided to sell duplicate material in order to obtain additional money for his publication; to facilitate this the new species were described. Such collections were sold to J. G. Anthony, Hugh Cuming, E. Johnson (of Waioli, Kaui, Hawaiian Islands), H. Krebs, E. C. Layard, M. Largilliert, S. Moricand, A. Mousson, R. MacAndrew, T. H. Newton, W. H. Pease, S. Petit de la Saussaye, Felipe Poey, J. H. Redfield, R. J. Shuttleworth, Robert Swift, Frederick Sturm, Benjamin Tappan and others.

We list these collectors simply as an aid in tracing the whereabouts of some of the Adams specimens. All would be heautotypes and probably most could be considered as paratypes. The collections of many of the people mentioned above have been donated or sold to various museums in many parts of the world. Very probably many more names could be added to this list. Most of the names given above were obtained from Amherst College. Adams had printed extra copies of his Catalogue of the Land Shells which inhabit Jamaica (Contributions to Conchology no. 9, pp. 179–186, 1851) and the index to his Catalogue of Shells Collected at Panama, 1852. These were sent to his correspondents who checked their wants and returned them to Adams for pricing.

Specific locality data were seldom given by Adams. This is difficult to understand in a man who appreciated the remarkable speciation and differentiation that occur locally in the Jamaican land snail fauna. Occasionally his labels carry more information as to locality than his published record, but these instances are infrequent. Edward Chitty, a student-colleague of Adams, realized this omission and in the few papers he published on the Jamaican land mollusks added such data for the species originally described by Adams.

Another unfortunate practice of C. B. Adams was the sending out of material under manuscript names. Many of these species were never described as these manuscript names were discarded for others or were later held to be synonyms of species already described. Certain of these names have appeared

in the published record and much time has been lost in searching the writings of Adams to establish their validity. A classic example is that of *Torinia canalifera* 'C. B. Adams' Dall (Clench 1948, Nautilus **61,** p. 104).

Charles Baker Adams

January 11, 1814—January 18, 1853

To the student of West Indian and Panamic mollusks the name of C. B. Adams is most familiar. Adams was one of that remarkable group of malacologists interested in the West Indies during the middle of the last century. Among this fraternity were Thomas Bland, Henry Krebs, F. Poey, J. H. Redfield, Edward Chitty, Robert Swift, A. H. Riise and others—all men who have left their stamp on the literature of that region. However, C. B. Adams was probably one of the most important of this group and it has been said that it was his enthusiasm and personality that stimulated many of the others.

Charles Baker Adams was born in Dorchester, Massachusetts on January 11, 1814. His early life was spent in and around Boston where his interest in Natural History developed at an early age. He attended Phillips Academy at Andover, Massachusetts and in 1830 entered Yale University, New Haven, Connecticut. In his sophomore year, however, he transferred to Amherst College, Amherst, Massachusetts from which he was graduated with honors in 1834. He then entered the Theological Seminary at Andover, but soon abandoned this work to assist on the geological survey of the State of New York which was directed by Professor Hitchcock under whom he had studied at Amherst. When Professor Hitchcock gave up the survey due to ill health, Adams, unwilling to continue it alone, turned to lecturing on geology at Bradford Academy, Bradford, Massachusetts, and in October 1836 he accepted a position as tutor at Amherst College.

In September 1838 C. B. Adams became Professor of Chemistry and Natural History at Middlebury College, Middlebury, Vermont where he immediately began building up a college museum. This was at the time of the beginning of a nationwide interest in state geological surveys and in the spring of 1845, C. B. Adams was appointed head of the survey for Ver-

mont. For three years he worked on this survey while teaching at Middlebury College, publishing four annual reports on the work accomplished. In 1847 he accepted a position as professor of Zoology and Astronomy at Amherst College where he was the first strictly biological teacher to serve the college. As no further money was appropriated by the Vermont legislature for the geological survey and as Adams' interest had turned elsewhere, the fourth annual report was only a very small portion of the big work which had been originally planned.

Taking up his teaching duties at Amherst, Adams apparently dropped his interest in geology and turned his attention to the study of mollusks. He had been interested in this group for some time and had collected rather extensively in New England. He had exchanged with other collectors throughout the country and had published several papers on New England mollusks, some of these with Jesse W. Mighels* of Portland, Maine.

In the winter of 1843–1844 Adams made his first trip to Jamaica, in the West Indies. He quickly realized the great possibilities for research and in 1845 published his first paper on Jamaican mollusks. Adams returned to Jamaica in 1848–1849 and in 1850–1851 he made a trip to Panama. Again in 1852 he returned to the West Indies, this time to visit Robert Swift at St. Thomas, in the Virgin Islands. Here he was stricken with yellow fever and died on January 18, 1853 at the age of thirty-nine. He was buried in the public cemetery at St. Thomas where a gravestone was erected to his memory by his American friends.

Descriptions of the many new species which were found in Jamaica as well as notes on other West Indian species and their distribution were published in various journals but principally in the 'Contributions to Conchology,' a series privately published by Adams. In these papers he brought out preliminary descriptions of the many new species so that he could exchange and sell material and in this way finance additional trips to collect material in preparation for a large, illustrated

*For an account of Jesse Wedgewood Mighels see R. I. Johnson 1949, *Occasional Papers On Mollusks* **1**, no. 14, pp. 213–232.

monograph of Jamaican mollusks which he was planning to write with Edward Chitty. Though Chitty published one additional number of Contributions to Conchology he never undertook the large monograph on the West Indian mollusks which had been planned by them jointly.

W. S. Tyler and E. Hitchcock in their histories of Amherst College gave rather vivid accounts of the personality and character of C. B. Adams. We quote portions from their books. The following is from the account of W. S. Tyler.

"He was an intense thinker. He was an intense worker. At the same time his thinking and working were subjected to the most rigid, undeviating, unbending system and method. He seldom smiled, and never laughed. From his external appearance, you would judge him incapable of wit or humor. Yet ever and anon a flash of dry wit broke from those marble lips which moved the hearers to laughter and the more irresistibly, because it produced not the slightest change in the countenance of the speaker.

"His speech and outward action were indicative of imperturbable calmness, nay of the coldness of pure intellect without a spark of passion or emotion. But beneath that cold exterior like the perpetual and unchanging snow and ice of Hecla, there was a soul of fire—a volcanic intensity of thought and feeling and action which nothing could chill and nothing withstand—which made him a man of irresistible power."

President E. Hitchcock wrote: "I never knew a man who would do as much in collecting, arranging and ticketing specimens as he. He gave his whole time to it, regardless of the laws of health, which with him was not the most vigorous. So economical was he of time, that in going from his cabinet to his meals he had learnt to move upon a trot, and I am afraid that too many midnight hours saw his lamp burning. He had two characteristics fully developed, which are indispensable to form the distinguished naturalist. The one was the power of giving a logical attention to minutiae and the other the power of grasping great principles and using them for the arrangement of details.

"I think I never saw a man all of whose operations were such perfect clock-work as those of Professor Adams. He was rigidly exact in the perfomance of his duties and could tolerate

no delinquency or irregularity in other. Hence he could not always get along agreeably when associated with others in a common enterprise. Toward the close of his life he became exceedingly tenacious of his own plans, and would rarely submit to modify them at all, however strongly advised. Knowing that I had always been his friend, he had in earlier days paid a good deal of deference to my advice; but not so towards the close of life."

Concerning his last visit to the West Indies President Hitchcock, who had advised against his going, added the following:

"He went and stopping at the hospitable residence of a friend in St. Thomas was advised to keep within doors till the yellow fever had subsided. But his love of science set at naught the suggestions of prudence, with the remark that there was no fever among the shell fish, and a little exposure brought on the fever of which he died."

Rather detailed accounts of the life of C. B. Adams have already been published by Thomas Bland, W. H. Dall, Henry M. Seely and others so we have reduced this to a brief sketch and refer those interested to these more complete accounts.

Acknowledgments

Without financial aid from two friends, this present study would have been impossible, at least in its extended form. This aid enabled us to photograph individually most of the specimens on the following plates so as to bring out to the best advantage the characters of diagnostic value. Harald A. Rehder and R. Tucker Abbott, both of the United States National Museum, have given us their hearty cooperation in many ways, particularly in hunting up early exchange material of Adams, which is not now extant in the Adams collection. Such material has been loaned to us for study and use in this present paper. Lectotypes chosen from this material are, of course, deposited in the United States National Museum. Our thanks are due to H. A. Pilsbry for the loan of the original plate on the species of *Vitrinella*. These exceedingly small shells would have been most difficult to photograph. The present plate is based upon drawings. To Miss Rena Durkan of Morgan Hall, Amherst College Library, we are indebted

for her kindness in making available for our study, books, pamphlets, exchange lists and other data about Adams now under her care. We are also grateful to Harold B. Hitchcock, Department of Biology, Middlebury College, who kindly made the collection in his charge available for our study. To Frank White, Staff Photographer in the Biological Laboratories, we owe much for his careful and painstaking work. Minute shells when greatly magnified are difficult subjects to photograph.

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Papers privately published by Adams were limited in the number of copies and as a consequence are rarely obtainable today. Complete copies of his "Contributions to Conchology" are seldom offered by second-hand book dealers and even odd numbers of the twelve issued by Adams are infrequently offered for sale. For this reason, all of the original descriptions of Adams are published in full in this present report, making it possible for those not in a position to consult the originals to have at hand the complete story of each species described as well as figures of the type specimens never published by Adams.

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* In many early publications, this Journal is referred to as Silliman's American Journal.

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———— 1853, [in] Exploration of the Red River of Louisiana in the year 1852 by R. B. Marcy and G. B. McClellan. Senate Document no. 54, Washington, D.C. Appendix F. Shells, pp. 253–255.

Original Descriptions of the Western Atlantic Marine Mollusks Described by C. B. Adams

The many descriptions by Adams vary greatly in their completeness. When several specimens of a species were involved, he drew upon all of them for his diagnoses. His measurements, however, were based upon a single specimen. In general, he measured to one-hundredth of an inch. This is a little difficult

to understand as no attempt was made to give a range in size nor to set aside the specimen measured to be the holotype or "specimen selected" to represent the species. In our selection of lectotypes* we have attempted to locate the single specimen that Adams measured. In many of his type lots, no such specimen now exists. It would appear that certain of these specimens at least were subsequently sent out on exchange.

Many of the types are imperfect shells. These represent the single specimens Adams described or the best specimen in a series of poor and beach rolled material.

The initials C. to C. refer to Contributions to Conchology. Numbers within brackets in the body of Adams' descriptions refer to the original pagination. The plate and figure references given on the same line as the species name refer to the plates in the present report.

Original figures of Adams are also given on our plates, usually twice the original size. In most cases these are the only available figures. Specimens of most of the species described by Mighels and Adams were not in the Adams Collection.

All species are arranged alphabetically in the body of this report regardless of the genera in which they were described. However, as far as possible, species are grouped on the plates according to the various genera in which Adams had placed them.

abbreviata *Adams,* **Marginella** Plate 32, fig. 8

1850, C. to C. no. 4, p. 56.

Shell oblong, but much contracted anteriorly: white: smooth and shining: spire very short: apex rather obtuse: whorls about three and one-third: labrum incurved and contracting the aperture: varix produced a little way on the spire: columella with four plaits of which the upper one is small.

Mean divergence about 90°; length of spire about .04 inch; total length .22 inch; breadth .11 inch.

This shell resembles *M. lactea* Kr., but is much shorter,

* *Lectotype*—a cotype chosen subsequently to the original description, to take the place which in other cases a holotype occupies (C. Schuchert and S. S. Buckman 1905, Science (NS) **21,** pp. 899–900).

and is broader at the top of the last whorl; in *M. lactea* the varix extends farther on the apex.

Jamaica.

aberrans *Adams,* **Purpura** Plate 32, fig. 9

1850, C. to C. no. 4, p. 58–59.

Shell ovate or subfusiform: white: longitudinally plicately ribbed; with close-set, well elevated spiral ridges which are continuous over the longitudinal folds, and are closely and finely but strongly imbricated, and of which the alternate ones are often much smaller: apex acute: spire with the outlines almost rectilinear: whorls about seven, quite convex, with a rather deep suture: aperture obovate: lip rather sharp, serrated by the sculpture; labium with a moderate deposit: umbilicus slight. An old shell is subcanaliculate.

Mean divergence 55°; length of spire .26 inch; total length .47 inch; breadth .27 inch. Of another specimen, mean divergence 65°; length .46 inch; breadth .3 inch.

This species resembles *Murex costellaris* Lam., the *Purpura costellaris* of Reeve.

Jamaica.

[This species is in the genus *Tritonalia.*—Clench 1947, *Johnsonia* **2,** p. 90.]

aberrans *Adams,* **Rissoa** Plate 33, fig. 10

1850, C. to C. no. 7, p. 113.

Shell long ovate conic: white: strongly sculptured with three or four spiral ridges, which are decussated, with nodulous intersections, by transverse ridges, of which there are about sixteen on each whorl; anteriorly the transverse ridges are obsolete, and three or four additional spiral ridges are nodiferous: apex acute: spire with the right side nearly rectilinear and the left quite curvilinear, the axis being curved: whorls seven, nearly planulate, with a subcanaliculate suture; last whorl rather large: aperture rather small, deeply notched anteriorly; labrum rather thick and well excurved. This species connects the genus with those Cerithia, in which the canal is reduced to a notch.

Mean divergence about 32°; length of spire .1 inch; total length .165 inch; breadth .08 inch.

Jamaica.

affinis *Adams,* **Eulima** Type lost.

1850, C. to C. no. 7, pp. 110–111.

Shell similar to that of *E. conica.* but the form is more slender, the axis scarcely curved, the last whorl less oblique anteriorly, and the aperture is larger.

[111] Mean divergence about 19°; length .09 inch; breadth .034 inch.

Jamaica.

affinis *C. B. Adams,* **Phasianella** Plate 36, fig. 6

1850, C. to C. no. 4, p. 67.

Shell ovate: with waving or zigzag transverse flames of brown or red; and very numerous minute well defined dots of red or brown, with white shadows on their right side, somewhat in irregular waving or zigzag series, on a whitish ground: apex acute: spire with moderately convex outlines: whorls nearly five, moderately convex, a little flattened along the middle, with a moderately impressed suture: aperture elliptical: with a small umbilicus and groove issuing from it, which are sometimes concealed by the labial deposit. This species was at first mistaken for *P. pulla.*

Mean divergence about 60°; length of spire .16 inch; total length .31 inch; breadth .19 inch.

Jamaica.

affinis *Adams,* **Psammobia** Plate 45, fig. 7

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 10.

Praecedenti affinis [*Psammobia purpureomaculata*], sed t. fusca, atropurpureo biradiata, exilissime decussata. Long. .66 poll.;* alt. .51 poll.; lat. .25 poll.

Jamaica.

[This is the common *Heterodonax bimaculata* Linné. It would appear that Adams at a later date reconsidered the forms that he had named as *Psammobia affinis; P. cerina; P. biradiata* and *P. purpureo-maculata* as synonyms of *P. bimaculata.* These were kept separately in his collection, but all under the name of *bimaculata.*—Clench and Turner.]

* poll. (=pollex) Latin, the thumb. Used as a unit of measure in older descriptions. This reference means one inch, i.e., the first joint of the thumb is approximately one inch in length.

affinis *Adams,* **Rissoa** Plate 34, fig. 5

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 6.

Praecedenti affinis [*Rissoa albida*]; spira graciliore; striis juxta suturam nullis; costulis ad suturam infra productis. Forsan var.

Jamaica.

alba *Adams,* **Mangelia biconica var.** Plate 32, fig. 1

1850, C. to C. no. 4, p. 65.

Var. *alba,* entirely a pure white color.

[See under *biconica.*]

Jamaica.

alba *Adams,* **Marginella** Plate 32, fig. 7

1850, C. to C. no. 4, p. 56.

Shell obovate, wide: pure opaque white: smooth and shining: spire concealed, with a shallow pit in its place: labrum well excurved in its upper part, produced to the summit, rather sharp edged, thick, smooth within: columella with four or five plaits, of which the upper one or two are inconspicuous.

Length .205 inch; breadth .13 inch.

Jamaica.

[*Marginella albida** C. B. Ad. and *M. nivea* C. B. Ad., belong to the same group as *M. apicina* Menke.—Krebs 1866, p. 396.]

albella *Adams,* **Pleurotoma** Plate 29, fig. 2

1850, C. to C. no. 4, p. 63.

Shell long ovate-fusiform: opaque snow white in the intercostal spaces, otherwise of a chalcedonic white: with strong wide transverse ribs, about thirteen on each whorl, nearly in continuous lines from the summit to the last whorl, and becoming obsolete anteriorly; with one or two raised spiral lines at the base of each whorl and numerous well rounded revolving ridges on the anterior half of the last whorl: apex acute: spire with slightly convex outlines, long and regularly conic: whorls seven, slightly convex, with a moderately im-

* Unquestionably an error by Krebs for *alba* C. B. Adams.

pressed suture: aperture nearly in the form of a [see plate 39, fig. 1]; labrum denticulate within; sinus rather wide and shallow near the upper end of the labrum: canal very short.

Mean divergence about 30°; length of spire .12 inch; total length .2 inch; breadth .07 inch.

Jamaica.

albicosta *Adams,* **Patella** Plate 36, figs. 1, 2

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 8.

P. t. crassa, atro-fusca, costulis 12 elevatis, totidem brevioribus, omnibus albis—instructa; margine pectinato, juniorum fusco—et albo-maculato, seniorum albo. Long. .84 poll.; lat. .7 poll.; alt. .41 poll.; dec. ant. : dec. post. : : 4 : 5.

Jamaica.

albicostata *Adams,* **Mitra** Plate 36, fig. 11

1850, C. to C. no. 4, p. 57.

Shell fusiform: dark brown or reddish brown, with whitish ribs, with a spiral band of a darker shade of the same, which is scarcely interrupted on the ribs, and a spiral white band which commences on the last whorl near the summit of the aperture: with obtuse longitudinal ribs, about 16 on each whorl, which are nearly obsolete in a broad shallow groove near the anterior extremity; with spiral striae in the intercostal spaces, and a few spiral raised nodulous lines anteriorly, of which the larger is continuous with the upper columellar plait: apex obtuse: spire with the outlines quite convex: whorls six, moderately convex, with a well impressed suture: aperture narrow: columella with four plaits, of which the two lower are small and approximate, and the two upper are large and distant. This species resembles *M. cavea* Reeve.

Mean divergence 40°. Length of spire .35 inch; total length .59 inch; breadth .31 inch.

Jamaica.

albida *'C. B. Adams' Krebs,* **Marginella**

1866, Annals Lyceum Natural History New York **8,** p. 396.

[See *Marginella alba* C. B. Adams.]

albida *Adams,* **Pleurotoma** Plate 30, fig. 2

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 3.

P. t. parva, albida, linea flavo-fusca decurrente costulis interrupta; anf. 6, perconvexis, subangulatis, costulis crassis, et striis profundis decurrentibus minus saepe costulas superantibus—instructis; sinu haud profundo; canali subbrevi. Div. 30°; spirae long. .15 poll.; long. tot. .26 poll.; lat. .11 poll.

Jamaica.

[*Pleurotoma albida* C. B. Ad., and *P. fusiformis* C. B. Ad., appear to be synonymes.—Krebs 1866, p. 397.]

albida *Adams,* **Rissoa** Plate 34, fig. 2

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 6.

R. t. magna, diaphana, albida; apice acutissimo; anf. 10, a costulis pluribus exilissimis, ad cujusque inferam partem obsoletis, et striis exilissimis decurrentibus, eleganter, decussatis; striis juxta suturam profundioribus, anf. angustantibus; labio a labro supra sinu disjuncto. Div. 28°; spirae long. .2 poll.; long. tot. .31 poll.; lat. .11 poll.

Jamaica.

[Is a synonym of *Rissoina* (*Zebinella*) *decussata* Montague.—M. Desjardin 1949, *Jour. de Conch.* **89,** p. 200.]

albo-cincta *Adams,* **Mitra** Plate 36, fig. 10

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 2.

M. t. minima, fusiformi; anf. 6, fascia superiore fusca, inferiore alba majori ornatis, striis decurrentibus et costis latis spiralium anfractuum latitudine brevioribus—instructis; canali brevi. Div. 40°; spirae long. .11 poll.; long. tot. .2 poll.; lat. .1 poll. *M. savignyi* affinis.

Jamaica.

albo-cincta *Adams* **Pleurotoma** Plate 29, fig. 5

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 3.

P. t. parva, rubro-fusca, anf. 6, supra carina albo-tuberculata, infra carina enodi—instructis, mediis striatis, striis creberrimis subtilissimis decurrentibus; anf. ultimo alteris carinis tuberculosis, et fascia alba ornato; anf. etiam longitudinaliter costulatis, intersectionibus noduliferis; canali

brevi. Div. 45°; spirae long. .16 poll.; long. tot. .28 poll.; lat. .13 poll.

Jamaica.

albo-maculata *Adams* **Pleurotoma** Plate 29, fig. 6

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 3.

P. t. parva, rubro-fusca; anf. 7, infra longitudinaliter tuberculatis, supra tuberculis minoribus transversis et striis pluribus granosis decurrentibus—instructis; tuberculis et granulis albis; sinus ostio contracto; canali brevissimo. Div. 35°; spirae long. .25 poll.; long. tot. .48 poll.; lat. .06 poll.

Jamaica.

albo-vittata *Adams* **Pleurotoma** Plate 30, fig. 3

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 4.

P. t. parva, flavido-fusca, fascia alba latissima—cincta; sutura parum impressa; anf. 6, haud multum convexis, singulatim costis 8 vel 9 latis, et striis creberrimis decurrentibus inequalibus—ornatis; sutura haud multum impressa; sinu magno; canali brevissimo. Div. 33° ad 23°; spirae long. .15 poll.; long. tot. .25 poll.; lat. .1 poll.

Jamaica.

albovittatum *Adams* **Cerithium** Plate 38, fig. 6

1850, C. to C. no. 7, p. 122–123.

Shell conoid, turrited: light yellowish brown, with a spiral white band occupying the two lower spiral ridges: with three spiral ridges, of which the middle one is most [123] prominent, and on each whorl about sixteen very small transverse ridges, the intersections forming well developed nodules; anteriorly with another slightly nodulous spiral ridge: apex acute: spire with the outlines moderately curvilinear: whorls nine, a little convex, with an indistinct suture, last whorl terminating abruptly, concave anteriorly: aperture suborbicular: canal extremely short, wide, and straight.

Mean divergence about 24°; length of spire .09 inch; total length .11 inch; breadth .035 inch.

Jamaica.

[See note under *C. gemmulosum* C. B. Adams.]

algicola *Adams* **Cerithium** Plate 37, fig. 4

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 5.

C. t. irregulariter albo et fusco-maculata, caerulescente; varicibus albis vel fuscis, penultimo ab ultimo semi-anfractum distante, alteris $\frac{2}{3}$ anf. distantibus; anf. 10, subangulatis, striis decurrentibus, pluribus exilioribus 5 majoribus granulosis, et plicis longitudinalibus—instructis; labio supra uniplicato; canali brevi. Div. 35° ad 25°; spirae long. .52 poll.; long. tot. .73 poll.; lat. .33 poll.

Jamaica.

ambiguum *Adams* **Cerithium** Plate 38, fig. 7

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 4–5.

C. lafondii, Kr., affine; t. costis plu- [5] ribus, 20 ad 25, minoribus—instructa, praecipue elatiore minusque robusta.

	Div.	spirae long.	long. tot.	lat.
C. lafondii:	23°;	.57 poll;	.8 poll;	.8 poll.
" *ambiguum:*	17°;	.65 "	.8 "	.2 "

Jamaica.

[*Cerithium ambiguum* C. B. Ad., is syn. with *C. costata* Da Costa (Wood's Ind. Test. pl. 25, fig. 13), and *C. Petitii* Kien.—Krebs 1866, p. 394.]

[Is a synonym of *Cerithidea costata* daCosta.—J.C.Bequaert 1942, *Johnsonia* **1**, no. 5, p. 2.]

americana *C. B. Adams* **Lucina** Plate 46, fig. 1–2

1852, C. to C. no. 12, p. 243.

L. t. *Lucinae divaricatae* simili; crassiore, majore; striis profundioribus ornata; lunula minima, elongata, sinuosa; marginibus exilissime crenulatis, haud serratis. Long. 19.8 millim.; alt. 19.6 millim.; lat. 12.7 millim.

We wish to call the attention of *geologists* and of others, who have believed in the great geological antiquity and the wide geographical distribution of the so-called *L. divaricata*, to the just remark of Philippi (Zeit. f. Mal. 1848, p. 151): "nomine *L. divaricatae* plures species confusae, omnes divaricatim striatae." When the types shall have been properly distinguished, we believe they will be found to have the ordinary restriction both in time and in area. The Linnaean

name should be reserved for the Mediterranean species, since Linnaeus assigns his shell to a Mediterranean habitat.

L. eburnea Rv., from the west coast of tropical America, resembles this species more closely than does any other Atlantic species, but differs in having a more distinct and cordate lunule, and in having the striae more arcuated. The beaks of our shell are not oblique as in *L. ornata* Rv.

Habitat. Coney Is., New York; C. B. A.! and Jamaica; C. B. A.! St. Thomas; T. H. Newton! in Mus. Amh.[erst].

angulata *Adams* **Monodonta** Plate 39, fig. 12

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 7.

M. t. parva, crassa, olivacea, rubescente, maculis parvis quadratis albidis ornata; spira conica; sutura minime impressa; anf. 7, concavis, singulatim plicis 6 decurrentibus—instructis; anf. ultimo acute carinato, infra plicis 8 cincto; apertura subquadrata; umbilico angusto, subprofundo. Div. 75°; spirae long. .16 poll.; long. tot. .325 poll.; lat. .32 poll. *M. modulo* affinis.

Jamaica.

[*Modulus perlatus* (Wood?), of the collections at St. Thomas, and of Mr. R. Swift, is *Trochus angulatus* C. B. Ad.—Krebs 1866, p. 396.]

[Is *Modulus carchedonius* Lamarck. See Abbott, R. T. 1944, *Johnsonia* **1**, no. 14, p. 5.]

anomala *C. B. Adams* **Narica** (?) Plate 39, fig. 14

1850, C. to C. no. 7, p. 109.

Shell ovate: white, with a tinge of brown: with, on the penult whorl four, and on the last whorl eight, stout obtuse very prominent spiral ridges, which are decussated imbricately by very prominent regular incremental laminae: apex acute: spire with the outlines rather convex: whorls four, quite convex, with a rather deep suture; last whorl large and ventricose: aperture ovate, somewhat effuse and subacute anteriorly: labrum pectinate, rather sharp, thickened within: columella with a small transverse plait opposite the umbilicus, expanded and flattened below.

Mean divergence about 67°; length of spire .08 inch; total length .2 inch; breadth .13 inch.

Jamaica.

antiqua *Mighels and Adams* **Nucula** Plate 45, fig. 10

1842, Boston Journal of Natural History **4**, pp. 53–54, pl. 4, fig. 4.

N. testa parva, sub-trapeziformi, per-obliqua, transverse sulcata; dentibus posticis sexdecim, anticis sex; margine simplici.

Shell white, small, somewhat trapeziform, very in-equilateral, covered with deep transverse sulci; epidermis dark brown; teeth, sixteen posterior and six anterior to the beaks; beaks low, approximate; anterior margin abrupt, posterior regularly rounded, basal margin slightly curved, simple.

Length 7/10 inch; height 11/40 inch; breadth 1/5 inch.

Cabinets of Boston Soc. Nat. Hist., J. W. Mighels, and C. B. Adams.

REMARKS. This species resembles *N. proxima* Say, and *N. tenuis* Turton, but differs from both in the number and [54] arrangement of the teeth, in the deep transverse sulci, in its length compared with its height and width. It is scarce.

Fossil, Westbrook, in the vicinity of Portland, Maine.

arcuata *Adams* **Eulima** Type lost

1850, C. to C. no. 7, p. 110.

Shell ovate-conic, turrited: subtransparent, white: smooth and shining, with a fine impressed spiral line above the suture: apex acute: spire with the axis curved to an extraordinary degree in the upper whorls, with the outlines moderately curvilinear in the plane perpendicular to that of the curvature: whorls ten, quite convex, with a lightly impressed suture; last whorl long and fusoid: aperture rather long ovate: labium with a well defined deposit.

Mean divergence about 25°; length .165 inch; breadth .055 inch.

Jamaica.

[*Eulima arcuata* C. B. Ad. We believe this is to be nothing more than a monstrosity.—Krebs 1866, p. 395.]

arenaria *Mighels and Adams* **Cingula** Plate 39, fig. 6

1842, Boston Journal of Natural History **4**, p. 49, pl. 4, fig. 24.

C. testa minima, sub-cylindracea, striatula, subplicata;

spira conica, elongata, anfractibus sex, convexis; sutura impressa; apertura sub-orbiculari, dimidium spirae aequante; operculo corneo.

Syn. *Turbo arenarius* Montagu.

Shell minute, white, sub-cylindrical, sub-plicate longitudinally, and minutely striate transversely; spire elongated, conical; whorls six, convex; suture impressed; aperture sub-orbicular, half the length of the spire; operculum horny.

Length .10 inch; breadth .05 inch; divergence 30°.

Habitat. Casco Bay, taken from the stomach of a haddock in the summer of 1841.

But few specimens, have been found, which are in the Cabinet of J. W. Mighels.

armillatus *Adams* **Conus** Plate 31, fig. 10

1850, C. to C. no. 4, p. 59.

Shell obovate-conic; attenuated anteriorly: white, with small orange brown square spots, which are more or less confluent transversely, anteriorly and within the aperture of a pale purple color, which is interrupted within by a white fascia below the middle of the shell: solid, with fine revolving striae on the spire, and on the last whorl with very regular spiral rather distant minute granulous elevated lines, which, from the angle above nearly to the anterior extremity, resemble fine strings of beads, but anteriorly are crowded, smaller, and are irregularly and feebly granulous: apex acute: spire with the outlines a little concave: whorls nearly seven, not coronated: aperture rather open.

Mean divergence 90°; length of spire .2 inch; total length .59 inch; breadth .32 inch.

Jamaica.

[Is *Conus regius* Gmelin.—W. J. Clench 1942, *Johnsonia* **1,** no. 6, p. 3.]

augustae *Adams* **Pleurotoma** Plate 30, fig. 1

1850, C. to C. no. 4, p. 61.

Shell long ovate-fusiform: bright red, whitish on the folds and anteriorly, with a wide or sometimes a linear spiral band of brown, which is interrupted by the ribs: with nine broad longitudinal ribs on each whorl: apex obtuse: spire with the

outlines nearly rectilinear: whorls six and one-half, a little convex, with a lightly impressed suture: aperture obovate: sinus shallow: canal very short, wide, and strong.

Mean divergence 30°; length of spire .48 inch; total length .74 inch; breadth .27 inch.

Jamaica.

[*Pleurotoma Augustae* C. B. Ad., is *P. coccinata* Rv.—Krebs 1866, p. 397.]

babylonia *Adams* **Chemnitzia** Type lost

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 6.

C. t. parva, lactea; anf. (apice deflecto excepto) 4, carinis duabus perelevatis decurrentibus, intervallis concavis—ornata; anf. ultimo quadricarinato; labro a carinis pectinato. Div. 20; spirae long. .05 poll.; long. tot. .08 poll.; lat. .03 poll.

Jamaica.

barrattiana *Adams* **Corbula** Plate 47, figs. 7–8

1852, C. to C. no. 12, pp. 237–238.

C. t. ovato-triangulari, subtenui, [238] inequivalvi, vix inequilaterali, postice acuminata, margine ventrali excurvata: albida: rugis irregularibus parvis concentricis, in lunulam haud productis, ad valvam magnam haud multum majoribus; junioribus exilissime radiatim striatis: apicibus parvis, haud involutis: umbonibus postice acute angulatis: dentibus parvis. Long. 8′ ′ ′ .9; alt. 5′ ′ ′ .2; lat. 4′ ′ ′ .3.

Shell ovate-triangular, somewhat thin, inequivalve, slightly inequilateral, posteriorly acuminate, with the ventral margin well rounded: whitish: with small concentric irregular ridges, which are a little larger on the large valve, not produced into the lunule; with minute radiating striae in young shells: beaks small, not involute: umbones with an acute angle posteriorly: teeth moderately developed.

Length .35 inch; breadth .26 inch; height .17 inch.

Station.—In mud, in 4 or 5 fathoms water; C.B.A.!

Habitat.—Kingston harbor, Jamaica; C.B.A.! About 200 specimens were collected, many of which are immature.

bicolor *Adams* **Cerithium** Plate 37, fig. 15

1845, Proc. Boston Soc. Nat. Hist. **2**, pp. 5–6.

C. t. parva, solidiuscula, albida, fascia rubrofusca—cincta; anf. 15 (?), planulatis, lineis 5 elevatis decurrentibus, supra (2 exceptis) obsoletis, et lineis elevatis longitudinalibus pluribus, intersectionibus nodiferis—instructis; anf. [6] ultimo plica fusca cincto; columella uniplicata, plica decurrente; canali brevi. Div. 15°; aperturae long. .08 poll.; long. tot. .08 poll. ? [sic]; lat. .13 poll.

Jamaica.

[*Cerithium bicolor* C. B. Ad., is the *C. punctatum* L., of the collections at St. Thomas, W. I., and of Mr. Robert Swift of Philadelphia.—Krebs 1866, p. 394.]

bicolor *Adams* **Perna** Plate 48, figs. 6–7

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 9.

P. t. convexa, intus argentea, extra pallii impressionem aterrima, splendente; impressione musculari bilobata, parte altera majori suborbiculari, altera cuspidata; ligamentis 7, robustis. Long. .7 poll.; alt. 1 poll.; lat. .33 poll.

Jamaica.

biconica *Adams* **Mangelia** Plate 32, fig. 2

1850, C. to C. no. 4, p. 65.

Shell biconic: whitish, with a narrow spiral band of brown at the summit of the whorls, which is darker between ribs, and a similar wider band a little anterior to the periphery of the last whorl; (or some specimens may be described as pale brown, with a spiral band of white on the periphery of the whorls, and as white anteriorly): with strong transverse rounded ribs, about nine on each whorl, and excessively fine spiral rather distant raised lines, which are obsolete on the summits of the ribs: apex acute: spire with the outlines nearly rectilinear: whorls six, subangular, with a moderately impressed suture: aperture narrow: labrum often much thickened by the last rib: sinus near the upper extremity of the labrum, rather large in old shells: canal short.

Mean divergence 45°; length of spire .08 inch; total length .18 inch; breadth .09 inch.

This species resembles *P. symmetrica Rv.* and *Mangelia Dysoni Rv.*

Jamaica.

bilineata *'C. B. Adams' Reeve* **Mactra**

1854, May, Conchologia Iconica **8, Mactra,** pl. 15, fig. 72.

Jamaica. This was also described by Deshayes 1854 [Feb. 1855] Proceedings Zoological Society of London **22,** p. 67.

[A manuscript name of C. B. Adams, never described by him. Cotypes MCZ 154329.]

biradiata *Adams* **Psammobia** Plate 45, figs. 5–6

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 10.

Praecedenti affinis [*Psammobia affinis*], sed t. anterius longiore, candidissima, radiis 2 sanguineis latis, brevibus, ornata. Long. .49 poll.; alt. .38 poll.; lat. .18 poll.

Jamaica.

[See note under *Psammobia affinis* C. B. Adams.]

blandiana *Adams* **Corbula** Plate 47, figs. 3–4

1852, C. to C. no. 12, pp. 234–235.

C. t. crassa, subrhombica, vix inequivalvi, perinequilateralis; margine antice rotundata, aliunde rectilineari, postice infra acuminata: alba: costis magnis, subacutis, concentricis, postice minoribus; lineis radiantibus tuberculatis, microscopicis; tuberculis deciduis; valvis ambobus similiter insculptis; apicibus prominulis, vix involutis: umbonibus planulatis, postice valde angulatis: dentibus parvis. Long. 11′′′.2; alt. 6′′′.6; lat. 4′′′.5.

Shell thick, subrhombic, slightly inequivalve, very inequilateral; anteriorly well rounded, with the other margins nearly or quite rectilinear; posteriorly and inferiorly acuminate: white: with large blunt edged concentric ribs, which are more slender in the posterior area; with microscopic radiating lines of deciduous tubercles, which are visible only under a good magnifier; with both valves sculptured alike: beaks prominent, slightly involute: umbones flattened, with a stout posterior angle: teeth rather small. Under a good magnifier a crystalline structure is very conspicuous.

Length .44 inch; height .26 inch; breadth .18 inch.

Station.—Muddy bottom, at the depth of 3 or 4 fathoms; C. B. A.!

Habitat.—Port Royal, in Jamaica; C. B. A.! 5 specimens were collected.

brevis *Adams* **Mangelia** Plate 31, fig. 14

1850, C. to C. no. 4, p. 66.

Shell short, fusiform, orange or wax yellow, white along the upper part of the whorls and anteriorly: with very strong transverse ribs, about nine on each whorl, smooth on the summits, with unequal microscopic spiral elevated lines: apex subacute: spire with very convex outlines: whorls about six, moderately convex or subangular, with a lightly impressed suture: aperture quite narrow: labrum much thickened by the last rib: sinus rather large: canal very short.

Mean divergence about 45°; length of spire .065 inch; total length .135 inch; breadth .07 inch.

Jamaica.

brevis *Adams* **Phasianella** Types lost

1850, C. to C. no. 4, p. 67.

Shell subglobose: with a whitish ground and large spots of red on the upper part of the whorls; pale red on the anterior and middle of the last whorl; with well-defined spots of dark red sprinkled over the whole surface: with microscopic spiral striae on the upper whorls, otherwise smooth: apex rather obtuse: spire with very convex outlines: whorls about four, very convex, with a rather deep suture: aperture large, ovate-orbicular: umbilicus wanting.

Mean divergence about 80°; length of spire .04 inch; total length .1 inch; breadth .085 inch.

Jamaica.

canaliculata *Adams* **Odostomia** Plate 40, fig. 3

1850, C. to C. no. 7, p. 109.

Shell conic, turrited: white: smooth: apex acute: spire with rectilinear outlines: whorls six, planulate, with the suture in a small spiral channel; last whorl short and abruptly terminating: aperture broadly ovate: columellar plait nearly transverse.

Mean divergence about 20°; length .12 inch; breadth .045 inch.

Jamaica.

[*Odostomia canaliculata* C. B. Ad., and *O. solida* C. B. Ad., are very like each other.—Krebs 1866, p. 397.]

canalifera '*C. B. Adams*' *Dall* **Torinia**

Dall, W. H. 1889, Bulletin United States National Museum no. 37, p. 148.

[This was apparently a manuscript name of C. B. Adams and was never officially described. It was first listed by Dall in the reference above. See also Clench 1947 [1948] *Nautilus* **61,** p. 104.]

cancellatus *Mighels and Adams* **Fusus** Plate 39, fig. 10

1842, Boston Journal of Natural History **4,** pp. 52–53, pl. 4, fig. 18.

F. testa subulata, longitudinaliter plicata, transverse striata: anfractibus septem, convexis: sutura valde impressa; spira acuminata; apice acuta: apertura sub-ovata; labro crenato.

Shell rather slender, turreted, with about twenty longitudinal ribs, running a little obliquely to the left, crossed by numerous transverse, revolving, raised lines, giving the shell a cancellated appearance; whorls seven, convex; suture well impressed; spire gracefully tapering; apex acute; columella slightly arched at the upper part; aperture rather narrow, subovate; canal short, straight, rather wider at the base; labrum thin, delicately crenated by the transverse striae. [53] Length 13/20 inch; breadth 1/4 inch; divergence 22°.

Cabinets of Dr. Gould and J. W. Mighels.

Habitat. Casco Bay; taken from the stomachs of haddock in the summer of 1840. It must be regarded as very rare.

REMARKS. This species is very nearly allied to *Murex purpureus* Mont., (Turton Conch. Dict. 95) but is distinct in having a less number of volutions by three or four, by the direction of the ribs, which are "obliquely to the right," in *M. purpureus;* Montagu's shell is also described as "rugged," "very rough," &c., terms which will not apply to our shell; it is also said to be "purple," which color is regarded by the author as characteristic; our shell is variously colored, some specimens being tinged with purple, others are white.

candidissima *Adams* **Pleurotoma** Plate 30, fig. 5

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 4.

P. t. parva, candidissima; sutura profunda; anf. 5, supra

subangulatis, singulatim costis 8 vel 9 robustis subcompressis, et striis decurrentibus haud crebris parallelis—instructis; canali brevissimo. Div. 35°; spirae long. .1 poll.; long. .19 poll.; lat. .085 poll.

Jamaica.

[*Mangelia candidissima* C. B. Ad., is a white variety of *Pleurotoma badia* Reeve, of the collections at St. Thomas and of Mr. R. Swift, of Philadelphia.—Krebs 1866, p. 396.]

candidissimum *Adams* **Buccinum** Type lost

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 2.

B. t. parvula, alba, solida; anf. 6½, supra striis decurrentibus, costis (anf. cujusque 7 vel 8) ad suturam supra haud productis, latis, laevibus—ornatis; labro crassissimo; labio calloso. Div. 50°; spirae long. .275 poll.; long. tot. .45 poll.; lat. .23 poll.

Jamaica.

carinata *Mighels and Adams* **Cingula** Plate 39, fig. 18

1842, Boston Journal of Natural History **4**, p. 49.

[See under *Cingula semicostata* Mighels and Adams.]

cascöensis *Mighels and Adams* **Nucula** Plate 45, fig. 13

1842, Boston Journal of Natural History **4**, pp. 40–41, pl. 4. fig. 6.

N. testa ovato-lanceolata, sub-inequilaterali, compressa; postice attenuata; areola valde compressa; natibus parvis; dentibus anticis decem, posticis duodecim, parvis.

Shell ovate-lanceolate, rather thin, finely striate, slightly [41] inequilateral; anterior half regularly semi-oval; posterior half tapering nearly to a point, with an areola well defined, sharply compressed, with a slight wave below the areola; epidermis greenish straw-color; beaks small, nearly central within pearly-white; teeth small, ten anterior, and ten or twelve posterior, including some very minute ones near the beaks.

Length, .6 inch; height, .35 inch; width, .09 inch.

Cabinets of G. B. Sowerby, Esq., J. W. Mighels, and C. B. Adams.

Habitat. Casco Bay. A single specimen was found in the stomach of a haddock in the spring of 1840. Subsequently

we have found a single specimen of the above dimensions, and four or five very small ones.

REMARKS. This species is allied to *N. limatula*, Say, and *N. myalis,* Couth., but is easily distinguished from both by the number of teeth, the beaks being nearer the posterior extremity, and being much more compressed than either. It more nearly resembles the latter, but is uniformly lighter colored.

cerina *Adams* **Psammobia** Plate 45, figs. 3–4

1845. Proc. Boston Soc. Nat. Hist. **2**, p. 10.

P. t. parva, cerina, tenui, anterius procera et circulari, posterius angulata (angulo haud multum truncato), concentrice exilissime striata; dentibus parvis, prominentibus. Long. .39 poll.; alt. .31 poll.; lat. .17 poll.

Jamaica.

[See note under *Psammobia affinis* C. B. Adams.]

cerina *Adams* **Thetis** Plate 44, figs. 7–8

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 9.

T. t. parva, lineis elevatis concentricis distantibus et striis radiantibus ornata, cerina; lunula vulvaque transversim rubro lineatis; umbonibus minimis, acutis, pallide virentibus; margine supra angulato, alibi rotundato; pallii impressione subsinuata. Long. .4 poll.; alt. .39 poll.; lat. .21 poll.

Jamaica.

See *Gouldia.*

chittyana *Adams* **Corbula** Plate 48, figs. 4–5

1852, C. to C. no. 12, p. 238.

C. t. *Barrattianae* simili; sed multum crassiore, latiore, inequivalviore; praecipue differt quoad crescendi rationem duplicem, sicut *C. Dietziana.* Long. 8′ ′ ′ .6; alt. 5′ ′ ′ .8; lat. 5′ ′ ′ .2.

This species resembles *C. Barrattiana,* but differs in being very thick and solid, very wide, and in having two periods of growth, like *C. Dietziana:* it is also more inequivalve.

Length .34 inch; height .23 inch; breadth .22 inch.

Station.—In 4 or 5 fathoms water, in a muddy bottom; C. B. A.!

Habitat.—Kingston harbor, Jamaica; C. B. A.! We obtained only 4 specimens of this rare shell.

concinna *Adams* **Cingula** (?) Plate 39, fig. 4

1850, C. to C. no. 5, p. 70.

Shell broadly ovate-conic: subtransparent, wax brown, darker at the sutural ridge: smooth and shining; at the summit of the whorls with a narrow ridge scarcely elevated, but separated by an impressed line: apex rather obtuse: spire with the outlines moderately convex: whorls five, quite convex, with a well impressed suture; last whorl large: aperture acute above, in the rest regularly ovate: lip a little reflected on the left side: umbilical region slightly indented.

Mean divergence 53°; length of spire .03 inch; total length .075 inch; breadth .055 inch.

Jamaica.

concinna *Adams* **Phasianella** Plate 36, fig. 4

1850, C. to C. no. 5, p. 69.

Shell broad ovate, or ovate conic: with numerous well defined dots of opaque reddish brown on a subtransparent ground of very pale red or brown, the dots being less numerous and less uniformly sprinkled on the upper part of the whorls: surface well polished: apex rather obtuse: spire with quite convex outlines: whorls four, quite convex, with a well impressed suture: aperture ovate-orbicular, with its plane very oblique to the axis of the shell: labrum much curved: with an umbilical groove parallel to the labrum.

Mean divergence about 60°; length of spire .07 inch; total length .14 inch; breadth .1 inch.

Jamaica.

concinnum *Adams* **Buccinum** Plate 32, fig. 16

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 2.

B. t. parva, nitida, flavo-fusca, fuscomaculata, maculis plerumque seriatis; anf. 7, costis parvis, et striis decurrentibus; labro solido et albo-varicato, intus 6-denticulato; apertura lacunata. Div. 40°; spirae long. .12 poll.; long tot. .225 poll.; lat. .11 poll.

Jamaica.

[This name was changed to *Columbella decipiens* by Adams in his *Contributions to Conchology* no. 4, p. 55, 1850, as a new name in place of *Bucinnnm concinnum* Dillwyn 1817.]

concolor *Adams* **Phasianella** Plate 36, fig. 3

1850, C. to C. no. 4, p. 68.

Shell rather long ovate-conic: of a uniform glossy brown, rarely with a sutural band of a deeper shade of the same: surface highly polished: apex rather obtuse: spire with the outlines nearly rectilinear: whorls five, rather convex, with a well impressed suture; last whorl subangular: aperture ovate: labium with a thick deposit: with an umbilical indentation.

Mean divergence about 35°; length of spire .05 inch; total length .1 inch; breadth .06 inch.

Jamaica.

conica *Adams* **Cingula** (?) Plate 39, fig. 5

1850, C. to C. no. 5, pp. 70–71.

Shell elongated, conic: whitish, with large irregular spots of wax color, and a wax-colored summit: solid, with three or four slightly elevated obtuse spiral ridges, and about the periphery of the last whorl two or three more, all of which are slightly striated across; on the lower whorls with nearly obsolete broad ridges; anteriorly smooth: apex acute: spire with rectilinear outlines: whorls six and one-half, flat, with a lightly impressed suture; last whorl with a moderately acute periphery: aperture between quadrate and orbicular, nearly parallel with the axis of the spire: lip reflected on the left side and on the adjacent part of the anterior side: umbilical region moderately indented.

Mean divergence about 32°; length of spire .065 inch; total length .105 inch; breadth .06 inch.

These last three species we have referred, with some doubt, to *Cingula* of Fleming, restricting this genus to the section in which the labrum is not thickened and the aperture is Turbinoid, and excluding *Rissoa* in which the aperture is Melanoid and the labrum thickened. *C. concinna* however is with difficulty referred to the same generic type with *C. solida* and *C. conica*, being eminently distinguished

by its smoothness and translucency, (in this respect resembling, as also [71] in color, *Pupa ovata, P. milium,* &c.) and its broadly ovate form elegantly rounded below and acute above, with the same beautiful outline repeated in the aperture, as in some Phasianellae. The last two species have a striking coincidence in the general plan of sculpture, reflection of the left side of the lip, &c., and evidently belong to a restricted natural group, which perhaps should be separated from *Cingula.* We have been unable to obtain more than one specimen of each of these species.

Jamaica.

conica *Adams* **Eulima** Plate 36, fig. 7

1850, C. to C. no. 7, p. 110.

Shell conic turrited: white: smooth and shining: apex acute: spire with the axis moderately curved throughout with the outlines rectilinear in the plane perpendicular to that of the curvature: whorls about eleven, planulate, with an indistinct suture: last whorl subangular, quite oblique anteriorly: aperture small, ovate.

Mean divergence about 22°; length .1 inch; breadth .042 inch.

Jamaica.

costatus *Adams* **Chiton** Plate 42, fig. 8

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 8.

C. t. albido atroque maculata; areis lateralibus elevatis, costulis 3 vel 4 papillosis instructis, posterius subspinosis; areis dorsi mediis laevibus, transversim striatis; inter areas declivitas est, profunde striata; margine squamoso, alternatim flavido-albo atroque. Long. 1.35 poll.; lat. .75 poll.

Jamaica.

costulata *Adams* **Columbella** Plate 41, fig. 3

1850, C. to C. no. 4, p. 58.

Shell moderately elongated, ovate: whitish, with an ill-defined spiral band of very pale yellowish brown on the middle of the whorls, with the same color anteriorly; with a series of large deep brown spots at the summit of the whorls and also before the middle of the last whorl: with

obtuse longitudinal ribs, about twelve on each whorl, and unequal spiral striae: apex subacute: spire with moderately convex outlines: whorls about five and one-half, a little convex, with a well impressed suture: aperture small: labrum with a broad highly polished varix, denticulate within, sinuate above.

Mean divergence 40°; length of spire .12 inch; total length .19 inch; breadth .09 inch.

This species was described in Mss. five years since, but being informed that it was identical with *C. pygmaea Sowb.* just published, I suppressed the description and distributed the shell as *C. pygmaea.* It proves to be quite distinct.

Jamaica.

[*Columbella costulata* C. B. Ad., described from a single specimen from Jamaica, we consider syn. with *C. obesa* C. B. Ad.—Krebs 1866, p. 395.]

costulata *Mighels and Adams* **Turritella** Plate 40, fig. 16

1842, Boston Journal of Natural History **4**, p. 50, pl. 4, fig. 20.

T. testa albida; transverse subtilissime striata; anfractibus decem; superioribus sub-plicatis; duobus ultimis sub-laevibus, ultimo sub-carinato; apertura sub-ovata, anterius producta.

Shell whitish, translucent; whorls nine or ten, nearly flat, or very slightly convex; suture well impressed; last two whorls nearly smooth; the others longitudinally plicate, with microscopic transverse striae; last whorl sub-carinate; aperture rather less than one-fourth the length of the shell, subovate, produced anteriorly.

Length .7 inch; breadth .23 inch; divergence, 22°.

Habitat. Casco Bay; taken from the stomach of a haddock in the summer of 1841.

REMARKS. Although only a single specimen has been obtained, its characteristics are so obvious that we have not hesitated to describe it. It has no analogue on our coast, to our knowledge; it, however, resembles a very much enlarged *T. interrupta* Totten. It is in the cabinet of J. W. Mighels.

crassicosta *Adams* **Rissoa** Plate 34, fig. 6

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 6.

R. t. magna, crassa, lactea; anf. 7, costulis 11 vel 12, latis, obliquis, supra suturam profundam trajectis et striis pluribus exilissimis decurrentibus costulas superantibus—instructis; labro perincrassato, infra haud sinuato. Div. 35°; spirae long. .21 poll.; long. tot. .3 poll.; lat. .11 poll.

Jamaica.

[*Rissoa crassicosta* C. B. Ad., one poor specimen from Jamaica very like a *Scalaria crenata* L., is certainly not a *Rissoa,* but being placed next to the Scalariae a mistake may have arisen. —Krebs 1866, p. 397.]

[Is *Opalia* (*Dentiscala*) *hotessieriana* d'Orb.—Clench and Turner 1950, *Johnsonia,* no. 15 [In press]].

crassicostata *Adams* **Mangelia** Plate 31, fig. 12

1850, C. to C. no. 4, p. 66.

Shell subfusiform: dark reddish brown, paler about the apex: with very strong and very prominent transverse ribs, smooth on the summits, about ten on each whorl, with the transverse sections of the intercostal spaces almost regularly concave; with a few distant elevated spiral lines, of which one is on the middle of each whorl, and one is on the lower half, and the rest are anterior: apex acute: spire with quite convex outlines: whorls about seven, rather convex, with a well impressed suture: aperture narrow: labrum much thickened by the last rib: sinus rather large and deep: canal very short.

Mean divergence 42°; length of spire .13 inch; total length .22 inch; breadth .1 inch.

This species resembles *Mangelia badia Rv.,* but that shell is represented with a smaller spire and more slender ribs. It may possibly be a variety of *M. fusca Ad.*

Jamaica.

cumingii *Adams* **Truncatella** Plate 40, fig. 10

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 12.

T. t. parva succinea, rubente, scalariformi, decollata; anf. 4 perditis; anf. reliquis 4, singulatim costis 9 robustis acutis-ornatis; operculo subcorneo. Div. 22° ad 18°; spirae long, post decoll. .12 poll., antea. .18 poll.; long. tot. .17 poll.; lat. .08 poll.

Jamaica.

[Is a synonym of *Truncatella scalaris* Michaux.—Clench and Turner 1948, *Johnsonia* **2**, p. 160.]

cypraeoides *Adams* **Erato** (?) Plate 33, fig. 11

1845. Proc. Boston Soc. Nat. Hist. **2**, pp. 1–2.

M. t. solida, alba; anf. infra suturam fusco-canaliculatis; spira plana, parva; apertura lineari, pro [2] funde emarginata; labro extra crasso, intus exile crenulato; labio per totum transversim exile plicato. Long. .325 poll.; lat. .2 poll.

Jamaica.

dealbatum *Adams* **Cerithium** Plate 38, fig. 3

1850, C. to C. no. 7, p. 117.

Shell like that of *C. decoratum,* but snow white; the outlines of the spire are exactly rectilinear; the granules are less developed; and the canal is nearly straight.

Jamaica.

decorata *Adams* **Pleurotoma** Plate 29, fig. 4

1850, C. to C. no. 4, pp. 62–63.

Shell ovate-fusiform: covered, on a whitish ground, with a net work of bright brown irregular spots and lines, which on the upper whorls are less numerous, somewhat regular and darker: with, on the upper whorls, strong transverse ridges which become smaller and at length disappear on the penult whorl; [63] with very close-set rather coarse spiral striae, which are elegantly decussated on the lower whorls by excessively minute lines of growth: apex acute: spire with moderately convex outlines: whorls seven or eight, rather convex, with a well impressed suture: aperture large: labrum well excurved and produced in its lower half: sinus rather deep at the upper extremity of the labrum: canal short and very wide.

Mean divergence 32°; length of spire .27 inch; total length .55 inch; breadth .2 inch.

This species much resembles *P. lymneiformis* Rv., for which it has been mistaken. It also closely resembles in form, but not in sculpture, *P. patula Rv.*

Jamaica.

decoratum *Adams* **Cerithium** Plate 38, fig. 2

1850, C. to C. no. 7, p. 117.

Shell conic, turrited, sinistrorsal: white, dark reddish brown anteriorly, with many large rather square irregular spots of the same: with, on the upper whorls, two, and on the middle and lower whorls, three nearly equal spiral ridges, which are nearly concealed by numerous large nodules that are produced by the excessive development of the intersections of twenty-five to twenty-eight small transverse ridges on each whorl; anteriorly with two additional smaller or less strongly nodulous spiral ridges: apex very acute: spire with the outlines nearly rectilinear: whorls sixteen, planulate, with the place of the suture distinguished by a deeper groove; last whorl terminating very abruptly, so as to be concave between the periphery and the canal: aperture ovate-orbicular, modified a little by the penult whorl: canal strongly bent to the right, closed except near the extremity. This shell resembles *C. ornatum Desh.,* but that species has only ten or twelve whorls, its outlines are quite curvilinear and the last whorl terminates less abruptly.

Mean divergence about 20°; length .29 inch; breadth .085 inch.

Jamaica.

decipiens *Adams* **Columbella** Plate 32, fig. 16

1850, C. to C. no. 4, p. 55.

[New name for *Buccinum concinnum* C. B. Adams *non* Dillwyn 1817.]

decussatula *Adams* **Tellina** Plate 44, figs. 1–2

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 10.

T. t. rosacea, supra albida, iridescente, exilissime decussata; dente sinistra posteriore obsoleta. Long. 1 poll.; alt. .65 poll.; lat. .29 poll.

Jamaica.

delphinodonta *Mighels and Adams* **Nucula** Plate 45, figs. 8–9

1842, Boston Journal of Natural History **4**, p. 40, pl. 4, fig. 5.

N. testa parva, solida, trigona, transverse sub-sulcata; an-

gulis umbonalibus duobus; natibus prominentibus, subterminalibus; dentibus anticis tribus, posticis septem, elevatis, conicis, acutis.

Shell small, solid, very wide, oblique, triangular, transversely ribbed and striate irregularly; anterior margin nearly straight above, curved below, inferior margin well rounded, posterior moderately curved, making a right angle with the anterior; surface divided into three regions by the umbonial angles which diverge from the beaks; these are prominent, nearly terminal, often eroded; epidermis green; seven posterior and three anterior teeth, which are very long, slender and pointed.

Average length, .13 inch; height, .11 inch; width, .09 inch.

Cabinets of Bost. Soc. Nat. Hist., J. W. Mighels, and C. B. Adams.

Habitat. Casco Bay. Several hundred specimens were taken from the stomach of a single haddock, in the spring of 1841. At several times subsequently we have obtained them from the same source, sparingly.

REMARKS. This species is allied to *N. proxima*, Say, and *N. tenuis,* Turton, but is distinct from both in the number and arrangement of the teeth; also in respect to form, anterior and posterior umbonial angles, and in its greater width.

densestriata *Adams* **Mangelia** Plate 31, fig. 8

1850, C. to C. no. 4, p. 65.

Shell fusiform: white: with narrow prominent ribs, ten or eleven on each whorl, and crowded regular excessively fine deep spiral striae, which cover the entire surface and are not interrupted in crossing the ribs: apex acute: spire with rather convex outlines: whorls seven, subangular near the summit, with a rather deep suture: last whorl long, and gradually attenuated into a wide canal.

Mean divergence 40°; length of spire .13 inch; total length .28 inch; breadth .11 inch.

Jamaica.

[*Mangelia densestriata* C. B. Ad., is a white variety of *Pleurotoma badia* Reeve, of the collections at St. Thomas and of Mr. R. Swift, of Philadelphia.—Krebs 1866, p. 396.]

dietziana *Adams* **Corbula** Plate 47, figs. 5–6

1852, C. to C. no. 12, pp. 235–236.

C. t. solida, valde distorta, juniore vix inequivalvi, seniore perinequivalvi, inequilaterali; margine antice rotundata, aliunde rectilineari, postice infra acuminata: albida, radiis rubris, inequalibus, saepe confluentibus, in juniore obsoletis, ornata: costis magnis, subacutis, concentricis, in seniore irregularibus et in valva parva exilibus: apicibus prominulis, vix involutis: umbonibus planulatis, postice valde angulatis: dentibus robustis. Long. 10′′′.7; alt. 8′′′.4; lat. 9′′′.1; junioris, long. 10′′′.1; alt. 6′′′.6; lat. 4′′′.3.

Shell solid, much distorted, moderately inequivalve in the first stage of growth, afterwards very inequivalve, inequilateral; anteriorly well rounded, with the other margins subrectilinear, posteriorly and inferiorly acuminate: whitish, with unequal often confluent bright red rays, which are indistinct in the first stage of growth: with concentic blunt edged unequal ribs which are more irregular in the last stage of growth; with both valves sculptured alike in the first stage of growth, but in the second, the small valve is only striated: beaks prominent, slightly involute: umbones flattened, with a strong posterior angle: teeth rather stout.

Length .42 inch; height .33 inch; breadth .36. The corre-
[236] sponding dimensions of a shell commencing the second stage of growth are .4 inch; .26 inch; .17 inch.

This species is remarkable for two very distinct stages of growth, with a very abrupt transition from the first to the second. Until a little more than half grown, it is very much like *C. Blandiana* in the form of the outline, in the sculpture, and in having the valves similarly sculptured, and nearly equal. In the second stage of growth, the larger valve increases nearly three times as much as the other, and the growth is abruptly and strongly directed inwards so as greatly to increase the breadth of an old shell. The sculpture is more irregular, and on the small valve it is much finer and is covered with a coarse deciduous epidermis. Posteriorly the small valve is deeply set into the larger one. So abrupt is the change from the first to the second stage of growth, that the edge of the umbonial angle in the first

makes an angle with the edge in the second of only about 115°, and the general form is made very irregular. It is the analogue of *C. speciosa*, which inhabits the west coast of tropical America.

Station.—Unknown.

Habitat.—Kingston harbor (Jamaica), along "the Palisades," southeast from the city; A. Barratt! C.B.A.! 22 specimens were obtained, of which several were collected by my companion Dr. Barratt, who kindly gave me nearly all his specimens of this remarkable shell.

diminuta *Adams* **Pleurotoma** Plate 31, fig. 3

1850, C. to C. no. 4, p. 62.

Pleurotoma quadrata (?) Rv. The figure of this species in Reeve's Conch. Icon. represents quite accurately a species, which inhabits Jamaica, but the figure is three times the linear dimensions of our shell, although it is not said to be magnified. If our specimens belong to a distinct species, it may receive the name of **P. diminuta.**

Jamaica.

dubia *Adams* **Pleurotoma** Plate 31, fig. 2

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 4.

Pleurotoma dubia a *P. multilineata* haud multum differt; costae angustiores sunt, et ad basim compressae. Forsan var.

Jamaica.

dubiosa *Adams* **Rissoa** Plate 33, fig. 5

1850, C. to C. no. 7, p. 114.

Shell long ovate conic: white, translucent: with, on each whorl, nineteen or twenty obtuse ribs, which are produced on the last whorl to the anterior extremity: apex subacute: spire with the outlines moderately curvilinear: whorls seven, rather convex, with a well impressed suture: aperture moderately effuse: labrum well advanced: excurved, moderately thickened.

Mean divergence about 28°; length of spire .115 inch; total length .185 inch; breadth .065 inch.

Jamaica.

[Is *Rissoina chesneli* Michaud.—Desjardins 1949, Jour. de Conch. **89,** p. 197.]

effusa *Adams* **Litiopa** Type lost.

1850, C. to C. no. 5, p. 71.

Shell elongated, ovate: of a uniform brown wax color, subtransparent: apex obtuse: spire with the outlines very convex above, nearly rectilinear in the rest: whorls six, quite convex, with a well impressed suture: aperture ovate, anteriorly produced so as to resemble a very broad short canal: labrum thin, not very sharp, somewhat reflected: columella slightly twisted.

Mean divergence about 35°; length of spire .06 inch; total length .11 inch; breadth .06 inch.

Jamaica.

elatior *Adams* **Pleurotoma** Plate 29, fig. 7

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 4.

P. t. minima, subconica, albida, fuscescente, lineis flavidofuscis decurrentibus inequalibus a costis interruptis—ornata; spira elongata; anf. 6, haud multum convexis, singulatim costis 12 haud robustis, et striis decurrentibus subprofundis, una profundiore—instructis; sinu minime profundo; canali brevissimo. Div. 22°; spirae long. .125 poll.; long. tot. .19 poll.; lat. .075 poll.

Jamaica.

elongata *Adams* **Fissurella** Plate 41, fig. 7

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 8.

F. t. elongata, tenui, diaphana, fusca, albido-maculata, costulis 20 radiantibus, totidem brevioribus alternatim dispositis, et 40 brevissimis marginalibus ornata; incrementi striis maximis; anterius concava; posterius convexa; intus coerulescente; fissura atro-marginata, media utrumque sinuata. Lon. .375 poll.; lat. .2 poll.; alt. .11 poll. Dec. ant.: Dec. post. : : 1 : 2.

Jamaica.

emersonii *Adams* **Cerithium** Plate 37, figs. 12–14

1839, Boston Journal of Natural History **2,** pp. 284–285, pl. 4, fig. 10.

C. testa parva, conica, elongata, longitudinaliter rugosa, lineis granulatis cincta; anfractibus septemdecim, planulatis; apice acuta; sutura sub-impressa, ampla; apertura sub-quadrata; labro pectinato; columella in spiram ducta; cauda recurvata.

DESCRIPTION. *Shell* conical, elongate, with a regularly granulated surface, dark reddish brown; *whorls,* sixteen to seventeen, flattened, with two revolving series of prominent granules at the upper and lower margins, and a middle series, nearer to the upper than to the lower one, and less prominent, commencing between the fourth and eighth whorl from the base, and becoming more distinct as it approaches the base; in each series the granules are connected by a rather narrow but very elevated revolving line, which rises nearly as high as the granules, so that in worn specimens the appearance is of a continuous line moderately dilating into granules; the latter are also connected by wrinkles extending across each whorl; upper side of the whorls with an acute edged carina; *apex* acute; *suture* deeply impressed, broad; *body whorl* abruptly terminating with a granulous carina; *aperture* sub-rhombic, nearly square, [285] about one sixth the length of the aperture; *labrum* pectinated by the revolving granulous lines; *columella* spirally twisted; *canal* less than half the length of the aperture, recurved.

Length, .45 inch; breadth, .12 inch.

This is the common size; one specimen, however, is about six tenths of an inch in length.

Inhabits New Bedford harbor on the Fairhaven side, and Nantucket? [Massachusetts.]

Cabinets of the Boston Society of Natural History, of Geo. B. Emerson, Esq., of A. A. Gould, M.D., P. G. Seabury Esq., of New Bedford, and my own.

Var. a. Granules obsolete, with simple, broad, elevated, revolving lines, the middle one on several of the lower whorls as prominent as the outer ones.

Cabinets of William H. Taylor, Esq. of New Bedford, and my own.

REMARKS. This shell was first presented to me in Nantucket, as a native of the island, and a number of individuals were afterwards given to me by Pardon G. Seabury, Esq. of

New Bedford, who found them at Fairhaven. From these specimens, the species and variety were described at a meeting of the Society in August last. Since then I have seen an individual of the variety, which was found on an island in the harbor of New Bedford. At Fairhaven, I have found several specimens, (none of them living, though some of them were quite fresh), which had been thrown upon the beach with the *Cerithium reticulatum*, Totten. Their station is yet to be ascertained, but is probably below low-water mark.

I take pleasure in offering this humble tribute of respect to George B. Emerson, Esq., President of this Society.

[*Cerithium Emersonii* C. B. Ad., is very like *C. Costata* Da Costa.—Krebs 1866, p. 394.]

[Is *Cerithiopsis subulata* Montagu.—Johnson 1934, Proc. Boston Soc. Nat. Hist. **40,** no. 1, p. 108.]

erythronotus *Adams* **Chiton** Plate 42, fig. 5

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 9.

C. t. parva, subelongata, flavido-alba, irregulariter rubro-maculata; areis lateralibus costatis, costis nodulosis, areis dorsi striatis; margine squamuloso. Long. .55 poll.; lat. .3 poll.

Jamaica.

eulimoides *Adams* **Rissoa** Plate 33, fig. 9

1850, C. to C. no. 7, pp. 115–116.

Shell elongate conic: white, translucent in a spiral line below the suture: smooth and shining, with a broad very obtuse varix on each whorl, forming a slightly oblique line with the labrum: apex rather obtuse: spire with the axis moderately curved, convex on the left and rectilinear on the right side: whorls seven or eight, scarcely convex, with a lightly impressed suture: aperture scarcely effuse: labrum well excurved, not advanced, moderately thickened.

[116] Mean divergence about 26°; length of spire .14 inch; total length .2 inch; breadth .09 inch.

Jamaica.

exigua *Adams* **Mitra** Type lost.

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 2.

M. t. minima, ovali-elongata, albida; anf. 6, supra costellis plurimis et infra costis latis—instructis, supra atropurpureis, infra fusco-maculatis; ultimo infra sicut supra insculpto; canali brevi. Spirae long. .075 poll.; long. tot. .13 poll.; lat. .06 poll.

Jamaica.

exiguum *Adams* **Cerithium** Type lost.

1850, C. to C. no. 7, p. 118–119.

Shell long ovate conic, sinistrorsal: wax color: with, on the middle whorls, two, and on the lower whorls, three spiral ridges, of which the middle one is more slender, and numerous transverse ridges, the intersections being well developed nodules; anteriorly with three additional smaller less strongly nodulous spiral ridges: apex very acute: spire with the outlines most curvilinear along the middle, nearly rectilinear above and below: whorls ten, planulate, with the place of the suture distinguished by a somewhat larger groove; last whorl much smaller than the penult whorl, gradually tapering to the end: aperture rather small, subrhombic: canal very short, nearly straight.

[119] Mean divergence as far as the penult whorl about 17°; length .09 inch; breadth .035 inch.

Jamaica.

exile *Adams* **Cerithium** Plate 38, fig. 8

1850, C. to C. no. 7, p. 120.

Shell conic, turrited, very slender: brownish red, paler at the apex, whitish on the nodules: with one slightly elevated and three well elevated spiral lines, and on each whorl about twelve rather large obtuse ridges, the intersections being moderately developed into nodules; with another spiral well elevated line at the periphery of the last whorl: apex very acute: spire with the outlines rectilinear: whorls twelve to fourteen, quite convex, with a well impressed suture; last whorl terminating abruptly, concave anteriorly: aperture suborbicular: canal extremely short, reduced behind to a broad deep notch.

Mean divergence about 10°; length of spire .085 inch; total length .1 inch; breadth .03 inch. A fragment consisting of

the lower five whorls of a larger shell is .04 inch wide.

Jamaica.

exilis *Adams* **Chemnitzia** Type lost.

1850, C. to C. no. 5, p. 74.

Shell very slender: white: with about fifteen to eighteen stout transverse ribs, which terminate just below the convexity of the last whorl; with numerous spiral striae in the intercostal spaces, but not anteriorly; with the intercostal spaces on the last whorl anteriorly depressed below the adjacent surface of the anterior region: nucleus with about one and one-half smooth whorls, nearly at right angles to the rest of the shell: spire with rectilinear outlines: whorls ten besides the nucleus, planulate, with a moderately impressed suture: aperture rather short, subelliptical: labium scarcely thickened: umbilical region scarcely indented.

Mean divergence about 10°; length of spire .145 inch; total length .165 inch; breadth .037 inch.

Jamaica.

[*Chemnitzia exilis* C. B. Ad., *C. flavo cincta* C. B. Ad., *C. laevis* (=*levis*) C. B. Ad., and *C. subulata* C. B. Ad., are very like each other.—Krebs 1866, p. 395.]

fenestrata *Adams* **Columbella** Plate 41, fig. 2

1850, C. to C. no. 4, pp. 57–58.

Shell much elongated, ovate conic, sub-angular on the middle of the last whorl: opaque white around the aperture, with, at the summit of the whorls, a spiral opaque white band, which is interrupted by the angles of an approximate series of [58] brown spots, which have the form of the summits of Gothic windows, and in which the deep brown of the summit fades in descending to the middle of the whorls, where the shell is transparent; with three linear spiral series of alternating white and brown on the middle and anterior part of the last whorl: with spiral striae anteriorly, otherwise smooth: apex acute: spire with the outlines nearly rectilinear: whorls eight, nearly plane, with a lightly impressed suture: aperture in the form of a *o* but rather wider: labrum thickened and well excurved, smooth within, sinuate above.

Mean divergence 30°; length of spire .16 inch; total length .25 inch; breadth .08 inch.

Jamaica.

flavocincta *Adams* **Chemnitzia** Plate 49, fig. 8

1850, C. to C. no. 5, p. 74.

Shell moderately elongated: white, with a broad spiral band of yellowish brown along the suture: with about twenty-eight transverse well rounded rather slender ribs, which become obsolete on the anterior surface; with excessively minute spiral striae, in the intercostal spaces, coarser and traversing the ribs on the anterior region: nucleus consisting of about one and one-half smooth whorls, very oblique: whorls eight or nine besides the nucleus, slightly convex below the middle, slightly shouldered, with a distinct suture: aperture rather small, elliptical: labium moderately thickened: umbilical region scarcely indented.

Mean divergence about 12°; length of spire .11 inch; total length .145 inch; breadth .04 inch.

Jamaica.

[See note under *C. exilis* C. B. Adams.]

flavocincta *Adams* **Pleurotoma** Plate 29, fig. 1

1850, C. to C. no. 4, pp. 63–64.

Shell ovate-conic, much elongated: white, with a spiral band of yellowish brown on the upper and on the lower parts of the whorls, with spots of the same descending from the upper band into the intercostal spaces; with linear bands of the same below the middle of the last whorl: plicately and transversely ribbed on the middle of the whorls; with a very broad moderately elevated spiral ridge along the middle of the whorls; with a slight linear spiral ridge at the summit of the whorls, and a third spiral ridge of intermediate size at the lower part of the whorls: apex subacute: spire with the outlines nearly rectilinear: whorls about seven, scarcely convex, with an indistinct suture: aperture small, but rather wide: sinus moderate, near the upper end of the labrum: canal very short.

Mean divergence about 28°; length of spire .11 inch; total length .19 inch; breadth .07 inch.

Jamaica.

flavum *Adams* **Cerithium** Plate 37, fig. 11

1850, C. to C. no. 7, p. 122.

Shell conic, turrited: bright yellowish brown: with three prominent spiral carinae, and about twenty-six less prominent transverse slender ridges, the intersections being feebly nodulous; anteriorly with an additional slightly nodulous spiral ridge: apex acute: spire with the outlines nearly rectilinear: whorls about nine, a little convex, with a distinct suture; last whorl terminating very abruptly, concave anteriorly: aperture suborbicular: canal extremely short, very wide.

Mean divergence nearly 20°; length of spire .12 inch; total length .15 inch; breadth .045 inch.

Jamaica.

fluctuata *Adams* **Marginella** Plate 32, fig. 3

1850, C. to C. no. 4, pp. 56–57.

Shell obovate: whitish, with very narrow longitudinal strongly waved lines of brown, which extend from the summit to the anterior extremity, and which, being more conspicuous at the summit and at intervals, form spiral series, a little above and a little below the greatest convexity of the shell: spire entirely [57] concealed by the last whorl, with a callus reaching from the lip over the summit: labrum rather sharp, finely denticulate within: columella with five plaits, the anterior of which are larger. This species resembles *M. frumentum Sowb.*

Length .17 inch; breadth .11 inch.

Jamaica.

[*Marginella fluctuata* C. B. Ad., is very near *M. chrysomelina* Redf.—Krebs 1866, p. 396.]

fulva *Adams* **Corbula** Plate 47, fig. 13

1852, C. to C. no. 12, pp. 240–241.

C. t. ovato-triangulari, crassa, (inequi- [241] valvi?) vix inequilaterali, postice subrostrata; margine ventrali excurvata: fulva, intus roseo tincta: concentrice supra striata, infra fortiter sulcata: apicibus parvis, haud involutis: umbonibus perconvexis, postice biangulatis: dentibus mediocribus. Long. 7′′′.9; alt. 5′′′.6; lat. 5′′′.1.

Shell ovate-triangular, thick, (inequivalve?) subinequilateral, subrostrated posteriorly; ventral margin excurved: yellowish brown, tinged with red within: striated above, and strongly furrowed below, concentrically: beaks small, not involute: umbones very convex, posteriorly biangulated: teeth moderately developed. It differs from *C. Swiftiana* in being less rostrated; it is also shorter than *C. Kjoeriana;* and differs from both in color, and in being very strongly sulcated. We have therefore ventured to describe it from a single right valve.

Length .31 inch; height .22 inch; breadth .21 inch.

Station.—Unknown.

Habitat.—The specimen (in Mus. Amh.[erst] was said to have come from the Amazon; but the species is not a *Potamomya.*

fulvo-cincta *Adams* **Eulima** (?) Type lost.

1850, C. to C. no. 7, p. 111.

Shell ovate-conic, turrited: translucent, white, with a spiral band of bright brown below the middle of the whorls, and another along the suture, both of which bands are much and irregularly interrupted; with a few transverse irregular stripes of the same; smooth and shining: apex rather obtuse: spire with the outlines nearly rectilinear: whorls seven, planulate, with an indistinct suture: aperture narrow: columella subtruncated.

Mean divergence about 20°; length .2 inch; breadth .065 inch.

Jamaica.

fusca *Adams* **Pleurotoma** Plate 29, fig. 9

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 4.

P. t. parva, fusca; sutura profunda; anf. 5, singulatim costis 8 vel 9, et multis striis decurrentibus inequidistantibus—instructis; labro expanso; sinu parvo; canali brevissimo. Div. 35° ad 25°; spirae long. .12 poll.; long. tot. .22 poll.; lat. .1 poll.

Jamaica.

fusca *Adams* **Pyramis** Plate 38, figs. 20–21

1839, Boston Journal of Natural History **2**, pp. 282–284, pl. 4, fig. 9.

P. testa parvula, conica, decisa; epidermide fusca, nitida; anfractibus sex, convexis; sutura impressa, sub-duplicata; apertura ovali, supra angulata, infra rotundata; labro tenui; columella convexa, reflexa, haud plicata.

DESCRIPTION. *Shell* conical, rather elongate, subperforate; *spire* truncated; *epidermis* brown, shining, not membranous, not separable from the shell; *whorls* about six, not reckoning those which are lost at the apex, with minute striae of growth; *suture* strongly impressed, often double; sometimes with a revolving line at the upper side of the whorl; aperture about two-fifths the length of the shell, parallel to the axis, oval, angular superiorly, rounded inferiorly; *labrum* not thickened; *body whorl* entering the aperture in the upper of the left side, and separating the margins; *columella* emerging at the middle of the labrum, convex, reflected, smooth, without any fold; operculum?

Length, .15 inch; breadth, .07 inch.

Inhabits the harbors of New Bedford [Massachusetts] and vicinity.

Cabinets of the Boston Society of Natural History, of A. A. Gould, M.D., George B. Emerson, Esq., and my own.

REMARKS. This shell was found after my return from New Bedford, among a large number of the *Turbo obligatus,* and *Actaeon trifidus,* which were brushed into a box from wet planks, to which they were clinging, not far above low water mark. Six specimens were thus found; also four more with the *A. trifidus* in a parcel of sand from the harbor of New Bedford. Since then I have found a single specimen by dredging a few feet below low water mark in Dartmouth harbor. The middle of the body whorl and the lower part of the upper whorls were brown, but the rest was whitish. I have also received several specimens from P. G. Seabury, Esq. who found them at Tiverton, R. I., in company with the *Turbo minutus,* Totten, in the sand.

It resembles the *Jaminia exigua* Couthouy, Bost. Journ. Nat. Hist. II. 92, in several important characters but differs in others. The epidermis is dark brown, close, and shining; that of the *J. exigua* is very pale, nearly white, membranous and loose, and dull; the body whorl in our shell is much less ventricose and more cylindrical; incremental striae plainly

visible on the [284] epidermis; aperture less; no fold on the columella. It approaches nearly to the *Turitella bisuturalis* Say, which, however, is pellucid, with five whorls, suture not deeply impressed, is more elongate, and whorls flattened.

This species may perhaps be referred to Brown's genus *Pyramis.* Specimens with a revolving line on the upper side of the whorls, may be regarded as a well marked variety.

fuscocincta *Adams* **Pleurotoma** Plate 30, fig. 6

1850, C. to C. no. 4, p. 62.

Shell clavate pyramidal: pale yellowish white, with a sutural line of brown, anteriorly wax yellow with revolving lines of yellowish white: with a spiral series of large smooth well rounded nodules, on slightly elevated wide ridges on the lower half of the whorls; anteriorly with a few spiral raised lines: apex acute: spire with the outlines rectilinear: whorls seven or eight, not convex, with the suture not impressed: aperture rather wide: canal very short.

Mean divergence 33°; length of spire .17 inch; total length .27 inch; breadth .13 inch.

Jamaica.

fusco-lineata *Adams* **Pleurotoma** Type lost.

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 4.

P. t. parva, albida, lineis pluribus fuscis irregulariter interruptis cincta; anf. 7, singulatim costis 10 ad 12 et striis profundis decurrentibus haud costas superantibus—instructis; sinu minime profundo; canali brevissimo. Div. 25°; spirae long. .13 poll.; long tot. .2 poll.; lat. .08 poll.

Jamaica.

fusiforme *Adams* **Cerithium** Plate 38, fig. 4

1850, C. to C. no. 7, pp. 120–121.

Shell ovate-fusiform: reddish black, [121] whitish at the apex, darkest on the ridges, paler between them and anteriorly: with, on most of the whorls, three spiral ridges, of which the upper two are nearer together and in the upper half of the shell are confluent, and of which the upper one is larger: with numerous scarcely perceptible transverse ridges, which on the spiral ridges are excessively developed

into closely set nodules; anteriorly with another subnodulous spiral ridge, and with transverse striae: apex acute: spire with the outlines curvilinear: whorls eight or nine, slightly convex, with an indistinct suture; last whorl much smaller than the penult whorl: aperture suborbicular: labrum well excurved and advanced, slightly thickened: labium with a small callus above: canal very short, straight, wide.

Divergence in the upper whorls about 35°; length of spire .075 inch; total length .1 inch; breadth .04 inch.

Jamaica.

[See note under *C. gemmulosum* C. B. Adams.]

fusiformis *Adams* **Pleurotoma** Plate 30, figs. 7–8

1850, C. to C. no. 4, pp. 64–65.

Shell fusiform: white, with a tinge of brown along the suture and in the intercostal spaces: with large obtuse pliciform ribs, about nine on each whorl, and numerous unequal inequidistant spiral raised lines, of which one a little above the pe- [65] riphery of the whorls is much larger, giving a subangular aspect to the whorls: apex acute: spire with the outlines nearly rectilinear: whorls five or six, rather convex, with a well impressed suture: aperture long obovate: sinus small: canal wide and short.

Mean divergence 40°. Length of spire .1 inch; total length .18 inch; breadth .085 inch.

Jamaica.

[See note under *P. albida* C. B. Adams.]

gemmulosa *Adams* **Odostomia** Plate 40, fig. 1

1850, C. to C. no. 7, p. 109.

Shell ovate-turrited: white: rather thick; with, on the upper whorls, three, and on the lower whorls four stout prominent obtuse spiral ridges, and on each whorl about twenty to twenty-two transverse ridges, which are continued over the summits of the spiral ridges with well developed nodular intersections; anteriorly with five or six similar spiral ridges issuing from the aperture, and not decussated: apex subacute: spire with the outlines moderately convex: whorls seven and one-half, subplanulate, with a canaliculate suture: last whorl subacute anteriorly: aperture ovate, rather acute

above, moderately effuse and pointed anteriorly: columellar plait more prominent than the spiral ridges on the labium above it.

Mean divergence nearly 20°; length .155 inch; breadth .055 inch.

Jamaica.

gemmulosum *Adams* **Cerithium** Plate 38, fig. 13

1847, Proc. Boston Soc. Nat. Hist. **2**, p. 228 [nude name]; 1850. C. to C. no. 7, p. 120.

Shell conoid, turrited: reddish black, sometimes wax-colored on the lower part of the whorls: with three spiral ridges, of which the middle one is more elevated; and on each whorl about thirty-three small transverse ridges, with the intersections nodulous; with a fourth ridge which is slightly nodulous at the periphery of the last whorl, anterior to which are only incremental striae: apex acute: spire with the outlines moderately curvilinear: whorls twelve, moderately convex, with a well impressed suture; last whorl abruptly terminating, concave anteriorly; aperture broadly ovate: labrum very thin, well advanced along the middle: canal very short, nearly straight, with a broad deep notch behind.

Mean divergence nearly 30°; length of spire .17 inch; total length .21 inch; breadth .08 inch.

Jamaica.

[*Cerithium gemmulosum* C. B. Ad. There are two different species in one tube, but the one which we take to be the *C. gemmulosum* is closely allied to *C. iota* C. B. Ad., *C. albovittatum* C. B. Ad., and *C. fusiforme* C. B. Ad.—Krebs 1866, p. 394.]

gibberulum *Adams* **Cerithium** Plate 37, fig. 3

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 5.

C. t. minima, tenui, nigrescente; anf. 9. singulatim plicis 18, et striis decurrentibus latis 5 vel 6, intersectionibus nodiferis—instructis; anf. ultimo varice dorsali, plicis obsoletis et striis minoribus—instructo; apertura emarginata. Div. 30° ad 25°; spirae long. .17 poll.; long. tot. .24 poll.; lat. .085 poll.

Jamaica.

globulosus *Adams* **Pedipes** Plate 49, fig. 9

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 12.

P. quadridens ? Pfr. P. t. globulosa, crassa, castanea; lineis elevatis, inequalibus, inequidistantibus, decurrentibus, ornata; labro acuto, intus incrassato, supra unidentato; labio supra dente maxima, lamelliformi, transversa, ornato; columella bidentata; dentibus et columella albis. Div. 90°; spirae long. .08 poll.; long. tot. .19 poll.; lat. .14 poll.

Jamaica.

gouldii *'C. B. Adams' Pfeiffer* **Truncatella** Plate 49, fig. 10

1846, Zeitscrift für malakozoologie **3**, p. 183 [nude name in the synonymy of Truncatella caribaeensis Reeve].

[Is a synonym of *Truncatella succinea* C. B. Adams.—Clench and Turner 1948, *Johnsonia* **2**, p. 158.]

Gouldia

1847, Catalogue of the Genera and Species of Recent Shells in the collection of C. B. Adams, p. 29.

Syn. *Thetis* Ad. This name having been preoccupied by Mr. Sowerby for the two fossil species in the Green Sand formation of England, I propose the above in honor of my friend Dr. A. A. Gould.

gouldii *Adams* **Natica** Plate 41, fig. 12

1847, Catalogue of the Genera and Species of Recent Shells in the collection of C. B. Adams, p. 21.

Syn. *N. canaliculata* Gould; This name having been preoccupied by Lamarck for another shell, I propose to substitute for it that of the eminent naturalist who discovered this species.

gracilis *Adams* **Eulima** Type lost.

1850, C. to C., no. 7, p. 110.

Shell ovate-conic, turrited: white, translucent, opaque along the suture: smooth and shining, with an impressed spiral line next below the suture: apex acute: spire with the outlines nearly rectilinear: whorls thirteen, slightly convex, with an indistinct suture; last whorl gradually tapering an-

teriorly, rather short: aperture rather narrow: labrum much advanced along the middle.

Mean divergence about 20°; length .24 inch; breadth .06 inch.

Jamaica.

gracilis *Adams* **Marginella** Plate 32, fig. 14

1851, C. to C. no. 8, p. 130.

Shell between fusiform and cylindric, slender: white, with three spiral bands of orange brown, of which the upper one appears on the spire, a part of the middle one is seen in the deflection of the suture in the last part of the penult whorl; the middle band is sometimes indistinct: smooth and shining: apex rather obtuse: spire moderately lengthened, with the outlines quite curvilinear: whorls nearly four, moderately convex, with the suture not very distinct; last whorl long: aperture long and narrow; lip moderately thickened, slightly incurved; varix slightly extended on the penult whorl; with four very oblique plaits.

Length .26 inch; greatest breadth .09 inch; least breadth .075 inch; length of aperture .175 inch.

This species resembles *M. avena Val.,* (*M. varia Sowb.*), but is much smaller, and much more slender, and has a longer spire.

Jamaica.

granulosa *Adams* **Lucina** Plate 46, figs. 3–4

1845, Proc. Boston Soc. Nat. Hist. **2**, pp. 9–10.

L. t. parva, globulosa, alba, nodulis subquincuncialibus plerumque ornata; dentibus lateralibus obso- [10] letis, cardinalibus robustis. Long. .34 poll.; alt. .31 poll.; lat. .35 poll.

Jamaica.

greenii *Adams* **Cerithium** Plate 37, figs. 17–18

1839, Boston Journal of Natural History **2**, pp. 287–288, pl. 4, fig. 12.

C. testa nigro-rubra, infra cylindraca, supra tereti, rugosa; spira elongata; anfractibus duodecim; apice laevi, acuta; sutura sub-duplicata; apertura ovali, parva; columella subspirali; cauda perbrevi.

DESCRIPTION. *Shell* blackish red, cylindrical in the lower half, tapering above, thickly and deeply rugose [288] with three revolving elevated lines, swelling upon the rugae into granules; the lower series of granules rather larger, and the upper one less than the middle series; the upper series nearer to the middle one, and obsolete on the upper whorls; the lower series appearing first in the progress of growth; *spire* elongate; *whorls* about twelve; apicial ones smooth, nearly white and pearly; *suture* rather broad, impressed, divided by a revolving black ridge, which is obsolete between the upper whorls, and is prolonged around the body whorl, with two other black ridges emergent from the aperture; *aperture* oval, nearly as broad as long, scarcely more than one sixth the length of the shell; *columella* rather prominent below, subspiral; *labrum* obtusely notched by the revolving lines; *canal* very short, not more than one sixth of the length of the aperture, slightly recurved.

Length about .18 inch; breadth .05 inch.

Inhabits Dartmouth harbor [Massachusetts], and was found clinging to marine plants, a few feet below low-water mark, in company with the *Cerithium reticulatum* Totten, and *Cerithium nigrocinctum* Nob.

Cabinet of the Boston Society of Natural History, and my own.

REMARKS. Aug. 29th of the present year I obtained this species in the harbor of Dartmouth. The seaweed was rinsed in a bucket of water, by which process a great number of the *C. reticulatum* were washed off, among which were found several specimens of this species and of the *C. nigrocinctum.*

I take pleasure in dedicating this species to Thomas A. Greene, Esq. of New Bedford.

[Is in the genus *Cerithiopsis.*—Johnson 1934, Proc. Boston Soc. Nat. Hist. **40,** p. 108.]

helicoidea *Adams* **Vitrinella** Plate 35, fig. 1

1850, Monograph of Vitrinella, p. 9.

V. t. discoidea, alba, opaca vel translucente, linea suturali impressa, et striis transversis inequalibus insculpta: apice perobtusa: spira convexa, vix elevata: anfractibus quatuor, subconvexis, valde accrescentibus: sutura vix impressa:

labio subcrasso: umbilico magno, profundo, carina spirali instructo.

Discoidal: white, opaque and translucent in transverse alternating lines: with a single impressed spiral line near the summit of the whorls, and very fine irregular transverse striae: apex very obtuse: spire slightly and convexly elevated: whorls four, moderately convex, rapidly increasing, with a lightly impressed suture; last whorl regularly rounded, a little compressed beneath. Aperture not modified by the last whorl: labium with a rather thick deposit: umbilicus large and deep, with a spiral carina, exhibiting all the whorls. Mean divergence about 150°; length of spire .01 inch; total length .03 inch; greatest breadth .075 inch; least breadth .06 inch.

Port Royal, Jamaica.

[This milky-transparent species has been redescribed and figured by Miss Bush from a slightly larger specimen from off Cape Hatteras in 16 fathoms.

The "impressed spiral line" mentioned by Adams is the internal suture, visible by transparence, not external sculpture. The spiral figure of the suture, in dorsal view, is rather large, slightly exceeding half of the total diameter. The umbilicus is like a spiral stair, its side walls vertical, slightly overhung by the small spiral cord. The columella is a little thickened, and runs forward near its upper insertion. Growth-striae are extremely weak, where visible. Diameter 1.75 mm., height 1 mm.; 3½ whorls.—Pilsbry 1946, p. 2].

hyalina *Adams* **Vitrinella** Type lost.

1850, Monograph of Vitrinella, p. 5.

V. t. globosa, alba, subtransparente, laevi, nitida: apice obtusa: spira convexa, elevata: anfractibus quatuor, perconvexis, sutura impressa, anf. ultimo magno, regulariter rotundato, subtus valde indentato.

Globose: white, subtransparent: smooth and shining: apex obtuse: spire with the outlines very convex: whorls four, very convex, with a well impressed suture; last whorl rather large and regularly rounded: aperture slightly modified by the penult whorl: umbilical region well indented. Mean divergence about 95°; length of spire .02 inch; total length .05

inch; greatest breadth .065 inch; least breadth .055 inch.

Port Royal, Jamaica.

[The glass tube which should contain this species had been shattered before it came into my possession, and the specimen was not found. In addition to Professor Adams' original label there is a slip upon which Miss Bush had written: "not true Vitrinella = Natica? K.J.B."*—Pilsbry 1946, p. 4.]

imbricatula *Adams* **Lucina** Plate 46, figs. 7–8

1845. Proc. Boston Soc. Nat. Hist. **2**, p. 10.

L. pectini affinis, sed t. breviore, crassiore, orbiculari, subequilaterali, costulis valde imbricatis ornata. Long. .9 poll.; alt. .85 poll.; lat. .5 poll.

Jamaica.

inaequalis *'C. B. Adams' H. and A. Adams* **Plecotrema**

1853 [Nov. 1854] Proc. Zool. Soc., London, p. 122.

[A manuscript name never published by C. B. Adams.]

inequalis *Adams* **Thracia** Plate 45, fig. 14

1842, American Journal of Science and Arts **43**, p, 145, text figure.

T. testa fragili, per-inequilaterali, per-inequivalvi, irregulariter striata, postice truncata; valva sinistra subplanulata; altera perconvexa; callo nymphali cochleariformi, anterius elongato; ossiculo lunato, semicirculari.

Shell white, very thin, broadly and behind narrowly truncate, very inequilateral and inequivalve, much deflected to the left anteriorly; with the striae of growth unequal, numerous and crowded at the extremities, where, under a magnifier, the surface appears shagreened by minute wrinkles of the striae; epidermis very thin, brownish, thicker at the extremities; left valve nearly flat, with five obtuse angles radiating from the beak; right valve much larger and very convex, emarginate in the whole of the posterior truncation, with a groove and elevated umbonial angle defining the areolar region, its inferior margin sinuous; beaks small, pointed, lamelliform, the right one moderately excavated for the reception of the other; nymphoeal callosities spoon-shaped,

* Katherine J. Bush.

very much produced forwards and inwards; ossiculum semicircular and lunate, with an impression on the centre of each side, but much deeper on one side, situated between the spoon-shaped apophyses and the dorsal margin.

Dimensions.—Length 1.2 inch; height .75 inch; width .45 inch; length of ossiculum .1 inch.

Cabinet of Middlebury College.

Habitat, Gulf of Mexico.

Remarks.—A single specimen of this interesting species was presented to the cabinet of this college by the Rev. Wm. T. Hamilton, of Mobile, Ala. It is remarkable for the disparity of the valves, the irregularity of its form, and the sharp lamelliform beaks.

[*Thracia inequalis.*—We are requested by Prof. Adams to state, that this shell, which was described in our last July number, is the *Periploma trapezoides*, Desh. Consequently the name of *Thracia inequalis* must take the rank of a synonym. The species has recently been found in Mobile Bay. The editors.—1843, American Journal of Science and Arts **44,** p. 420.]

intermedium *Adams* **Cerithium** Plate 38, figs. 9, 12

1850, C. to C. no. 7, p. 119.

Shell conoid, turrited, sinistrorsal: reddish black or dark brown, with a broad white spiral band on the lower part of the whorls; white near the apex: with, on the upper whorls, two, and on the lower whorls, three nodulous spiral ridges, and anteriorly three additional less strongly nodulous spiral ridges: apex acute: spire with the outlines rectilinear above, moderately curvilinear below: whorls about twelve, planulate, with the place of the suture distinguished by a rather deeper groove: last whorl terminating rather abruptly: aperture rather small, obliquely obcordate: canal short, nearly closed at the origin, much deflected obliquely backwards. This species is intermediate between *C. ornatum* and *C. modestum.*

Mean divergence about 20°; length .2 inch; breadth .07 inch.

Jamaica.

intermedius *Adams* **Murex** Plate 39, fig. 15

1850, C. to C. no. 4, p. 60.

Shell elongated, ovate fusiform: whitish, with dingy brown spots behind the varices, and a few dark brown spiral lines within the aperture, and spots of the same on the labrum: with six varices on each whorl; with imbricate spiral striae; with strongly crenulated spiral very prominent ridges, which are slightly fringed in crossing the varices, and of which the upper two are approximate, and the next lower one is small: apex acute: spire with moderately convex outlines: whorls eight, very angular above the middle, and concave above the angle, with a deep suture; last whorl with a broad deep groove anteriorly, which is divided into pits by the varices: aperture obovate: canal rather short but white.

Mean divergence 43°; length of spire .46 inch; total length .85 inch; breadth .4 inch.

This species is similar to *M. erosus Brod.* and *M. alveatus Kr.*

Jamaica.

[This species is in the genus *Tritonalia.*—Clench and Turner.]

interrupta '*C. B. Adams' Philippi* **Littorina lineata** var. Plate 38, fig. 18

R. A. Philippi 1856 [in] Conchylien-Cabinet **2**, part 9, p. 24, pl. 3, figs. 14–15 (Jamaica).

[This species was never described by Adams though specimens under this name occur in his collection. We figure a paratype, MCZ no. 186123, that agrees in all essential details with the figured specimen of Philippi. The specimen which Philippi figured is here considered to be the lectotype.]

interrupta *Adams* **Vitrinella** Plate 35, figs. 4–5

1850, Monograph of Vitrinella, p. 6.

V. t. globosa, subconica, alba, subtransparente: sulcis elevatis tribus supra, et sulcis minoribus quinque vel sex subtus, spiralibus insculpta; striis transversis candidis subdistantibus a sulcis interruptis ornata: apice perobtusa: spira elevata, convexa: anfractibus quatuor, convexis, sutura haud valde

impressa; anf. ultimo magno, regulariter rotundato, subtus late et profunde indentato.

Depressed globose conic: white, subtransparent in the last whorl: with three rather large more or less elevated spiral grooves above, and five or six of less size beneath; with somewhat distant opaque white transverse striae, which are interrupted by the spiral grooves: apex very obtuse: spire with very convex outlines: whorls four, quite convex, with a moderately impressed suture; last whorl rather large, rapidly increasing, well rounded: aperture scarcely modified by the penult whorl: umbilical region widely and deeply indented. Mean divergence about 100°; length of spire .015 inch; total length .035 inch; greatest breadth .045 inch; least breadth .038 inch.

Port Royal, Jamaica.

[The nuclear shell, of a trifle over two whorls, is smooth. With a third whorl, three spiral ridges begin abruptly, their intervals crossed by axial threads as in the detail finished in fig. 5. On the last whorl there are about nine spirals, those above the periphery slightly larger and more widely spaced. The last spirals, around the umbilicus, are quite weak, so that the count of ribs may be a little indefinite, 8 to 10. The larger of two specimens in the Adams collection is broken, our figures of it left unfinished except for a detail of sculpture, fig. 5. The two specimens measure:

Diameter 1.2 mm., height 1 mm.; $3\frac{1}{2}$ whorls.

Diameter 1.05 mm., height 0.82 mm.

Except by its somewhat smaller size, this species very closely resembles *C. sanibelense* Pils. It belongs to a new subgenus of *Cyclostrema* to be defined in another place by Mr. McGinty and the author. *C. interruptum* (C.B.Ad.), *C. sanibelense* Pils. and *C. zacalles* Mazyck appear to be three size stages, otherwise nearly alike.—Pilsbry 1946, p. 5].

[Is *Parviturboides.*—Pilsbry and McGinty 1950, *Nautilus* **63,** p. 84.]

iota *Adams* **Cerithium** Plate 37, fig. 16

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 5.

C. t. minima, atro-rubra; sutura profunda; anf. 10, plicis decurrentibus tribus, (anf. ultimi 4,) et plicis longitudinalibus

minoribus, intersectionibus nodiferis—instructis; canali brevissimo. Div. supra 25°, infra nihil; spirae long. .095 poll.; long tot. .12 poll.; lat. .03 poll.

Jamaica.

[See note under *C. gemmulosum* C. B. Adams.]

jamaicensis *Adams* **Eulima** Plate 36, fig. 5

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 6.

E. t. gracili, lactea, diaphana, fascia alba opaca suturali—cincta; sutura lineari, subprofunda; anf. 13, planis, laevibus; apertura minima; labro expanso. Div. 20°; spirae long. .23 poll.; long. tot. .325 poll.; lat. .1 poll.

Jamaica.

jamaicensis *Adams* **Littorina** Plate 38, fig. 19

1850, C. to C. no. 5, pp. 71–72.

Shell oblong conic: with transverse somewhat oblique flames of rusty brown or slate color or black, on a white ground, which are interrupted on the middle of the whorls by a spiral slate-colored or black band, which is of unequal width in different shells and in different parts of the same shell, but is itself sometimes interrupted by the continuity of the transverse flames of white and slate color; brown on the columella; brownish black within, with a spiral band of white near the anterior extremity: solid, with very deep rather distant spiral striae, of which there are about eight on the penult whorl, and which are more crowded anteriorly: apex very acute: spire with the outlines nearly rectilinear: whorls seven, convex, with a lightly impressed suture; last whorl with an angular and subcarinated periphery: aperture rather broadly ovate: columella arcuate and flattened. The sculpture of this shell is like that of *L. carinata* Orb. and the form is like that of *L. lineata* Orb. (*L. ziczac* Desh. et al.) but is rather more robust, and the shell is more [72] solid. A variety of coloring has all the shell black except on the upper third of the whorls and on the anterior part. A variety of sculpture and coloring has the striae enlarged nearly to the width of the intervening ridges, and is mostly black with spirally elongated spots of white on the ridges.

Mean divergence 58°; length of spire .36 inch; total length .72 inch; breadth .44 inch.

Jamaica.

[Is a synonym of *Littorina ziczac* Gmelin.—Bequaert 1943, *Johnsonia* **1,** p. 15].

jamaicensis *Adams* **Natica** Plate 41, fig. 11

1850, C. to C. no. 7, pp. 111–112.

Shell obliquely ellipsoidal: pale brown or livid, somewhat mottled, often with three more or less distinct revolving series of transverse curved brown flames; with a white spiral infrasutural stripe; with the umbilical callus and most of the labial deposit dark brown: with obsolete spiral striae; with the oblique infrasutural striae quite distinct: apex acute: spire prominent, with the outlines moderately curvilinear: whorls nearly five, rather convex, with a well impressed suture: aperture not very wide, ovate but [112] compressed in the left outline: labial deposit rather thick; umbilical callus nearly filling the rather narrow umbilicus.

Mean divergence about 120°; length of aperture .42 inch; total length .53 inch; breadth .43 inch.

Jamaica.

jamaicensis *Adams* **Terebra** Plate 38, fig. 22

1850, C. to C. no. 4, p. 58.

Shell not very slender, regularly tapering above the last whorl: slate colored, with a series of darker spots on a white spiral stripe next below the suture; with a white spiral line emerging from the top of the aperture, and a brown one from the middle of the same; white between the brown stripe and the columella: with longitudinal unequal wrinkles, which extend from the suture nearly to the middle of the whorls; with excessively minute lightly impressed spiral striae: apex acute: spire with the outlines almost rectilinear: whorls twelve or thirteen, nearly plane: aperture long ovate: notch wide: columella slightly twisted. This species closely resembles the more slender *T. stylata Hinds* of the Philippine Islands.

Mean divergence 16°; length 1.9 inch; breadth .43 inch.

Jamaica.

[The original types of this species are lost. We have selected a specimen named by C. B. Adams to be a neoholotype.]

jayana *Adams* **Pleurotoma** Plate 30, fig. 4

1850, C. to C. no. 4, p. 61.

Shell clavate-pyramidal: black, with a broad spiral pale yellowish nodiferous band, and another of the same color anteriorly: with a series of broad close-set smooth not prominent nodules on the lower half of the whorls of the spire; anteriorly with four or five distant raised revolving lines, which are sometimes granulous, the granules being white: apex acute: spire with the outlines nearly rectilinear: whorls eight, planulate above the series of nodules, with a lightly impressed suture; last whorl subangular: aperture small: sinus a little below the extremity of the labrum: canal very short.

Mean divergence 30°; length of spire .31 inch; total length .5 inch; breadth .24 inch.

This species resembls *P. zebra Kr.*, for which it was for some time mistaken.

Jamaica.

jayanum *Adams* **Amphidesma** Plate 43, figs. 3–4

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 10.

A. t. orbiculari, flexuosa, haud hiante, lamellis concentricis crebris, interdum obsoletis, striisque radiantibus exilissimis ornata; (juniorum intus rubro-maculata; seniorum albidis vel flavis;) interdum rubro-radiata; dentibus 2, magnis, divaricatis, subremotis. Long. 1.41 poll.; alt. 1.36 poll.; lat. .7 poll.

Jamaica.

kjoeriana *Adams* **Corbula** Plate 47, figs. 1–2

1852, C. to C. no. 12, p. 237.

C. t. *C. Swiftianae* simili; sed posterius vix rostrata, paullulum productiore: rugis concentricis robustioribus, in lunulam productis; valvis ambobus similiter insculptis: angulo umbonali acutiore, a margine dorsali plus remota. Speciminis magni long. 12′′′.2; alt. 7′′′.6; lat. 5′′′.2.

This species so closely resembles *C. Swiftiana*; that a speci-

fication of the differences will suffice for description. *C. Kjoeriana* is not so distinctly rostrated, although usually a little more elongated posteriorly: the concentric ridges are stouter, and are continued into the lunule; both valves are sculptured alike: the umbonial angle is more acute and distinct, and is a little more distant from the posterior dorsal margin.

Length of a large specimen .48 inch; height .3 inch; breadth .26 inch.

Station.—In mud, in 4 or 5 fathoms water; C.B.A.!

Habitat.—St. Thomas; T. Bland! in sched. in Mus. Amh. [erst] Kingston harbor, Jamaica; C. B. A.! We obtained 70 specimens, most of which are immature.

Knoxiana *Adams* **Corbula** Plate 47, figs. 11–12

1852, C. to C. no. 12, pp. 238–239.

C. t. ovato-rhombica, subcrassa, subequivalvi, vix inequilaterali, postice truncata et infra acuminata; margine ventrali recta vel haud multum excurvata: albida: rugis concentricis reclivatis acutis regularibus, in speciminibus [239] magnitudinem variantibus, ad aream posticam crebrioribus: apicibus parvis, haud involutis: umbonibus subplanulatis, postice concavis, acutissime angulatis; area postica sulco bisecta, a labiis angulo disjuncta; dentibus validis, brevibus. Long. 12‴ .7; alt. 8‴ .1; lat. 7‴ .1; spec. alterius, long. 9‴ .4; alt. 7‴ .9.

Shell ovate-rhombic, moderately thick, subequivalve, slightly inequilateral, posteriorly truncated, and acuminated below, with the ventral margin straight or moderately excurved: whitish: with concentric regular acute-edged reclivate ridges, varying in size in different specimens, smaller and more crowded in the posterior area: beaks small, not involute: umbones flattened, with a very acute much developed angle, with the posterior area more or less concave and divided along the middle by a furrow, separated by an angle from the corselet: teeth short and strong.

Length .5 inch; height .32 inch; breadth .28 inch; another shell is .37 inch long, and .31 high.

Station.—In mud, in 3 or 4 fathoms water; C.B.A.!

Habitat.—Kingston harbor, Jamaica; C.B.A.! We obtained 2 entire shells and 20 odd valves of this rare species. It is an analogue of *C. bicarinata* of the Panama zoological province.

krebsiana *Adams* **Corbula** Plate 48, fig. 3

1852, C. to C. no. 12, p. 234.

C. t. trigona, perinequivalvi, inequilaterali; valva dextra rostrata; margine ventrali antice rotundata, postice recta: albida, supra et antice rubro tincta: valva parva concentrice striata; valva dextra concentrice sulcata, sulcis crebris, parvis: apicibus prominentibus, involutis: umbonibus: convexis: dentibus parvis. Long. 6.1 millim.; alt. 5.1 millim.; lat. 3.8 millim.

Shell trigonal, very inequivalve, inequilateral, with the large valve rostrated; with the ventral margin rounded anteriorly, nearly straight posteriorly: white, often tinged with pink on the beaks and umbones except posteriorly: small valve finely concentrically striated; large finely and closely furrowed: beaks prominent, much involuted: umbones very convex; with small posterior angles, one on the small valve and two on the other: teeth small.

Length .24 inch; height .2 inch; breadth .15 inch.

Probably it resembles *C. operculata* Phil.

Station.—Muddy bottom, at a depth of 3 or 4 fathoms; C.B.A.!

Habitat.—In the harbor of Kingston, between K. and Port Royal; C.B.A.! About 60 specimens were obtained, most of which are less than .2 inch long.

Jamaica.

laevigata *Adams* **Rissoa** Plate 34, fig. 7

1850, C. to C. no. 7, p. 114.

Shell long ovate conic, rather slender: white, translucent: smooth: apex acute: spire with the outlines slightly convex: whorls nearly seven, scarcely convex, with a moderately impressed suture: aperture moderately effuse: labrum well advanced and excurved, rather thick.

Mean divergence about 28°; length of spire .08 inch; total length .12 inch; breadth .045 inch.

Jamaica.

[Is *Rissoina browniana* d'Orbigny.—M. Desjardin 1949, Jour. de Conch. **89,** p. 205.]

laevissima *Adams* **Rissoa** Plate 33, fig. 7

1850, C. to C. no. 7, p. 115.

Shell long ovate conic: dingy white, with a very pale reddish brown spiral band on the upper part of the whorls, and two others on the middle and anterior part of the last whorl; but these bands are often obsolete, and speedily disappear in weathering: surface highly polished: apex very acute: spire with the outlines slightly curvilinear: whorls nine, slightly convex, with a moderately impressed suture: aperture rather small, very effuse: labrum well excurved and advanced, very much thickened. Conf. *Rissoina Browniana Orb.* Moll. du Cuba, Tab. XII. f. 33–35.

Mean divergence about 30°; length of spire .13 inch; total length .2 inch; breadth .09 inch.

Jamaica.

[Is *Rissoina browniana* d'Orbigny.—M. Desjardin 1949, Jour. de Conch. **89,** p. 205.]

lanceolata *Adams* **Mangelia** Plate 31, fig. 9

1850, C. to C. no. 4, p. 66.

Shell very long, lanceolate: brownish, more or less tinged with purple, with fine spiral lines of white and of dark brown, which are more conspicuous on the ribs; with a darker and wider brown line along the suture: with six very prominent acute transverse ribs on each whorl, which are nearly or quite continuous on the successive whorls; with a spiral elevated line, on the middle of the whorls, which is obsolete in the intercostal spaces and has nodulous intersections with the ribs: apex acute: spire with rectilinear outlines: whorls eight, scarcely convex, with a lightly impressed suture: labrum finely denticulate within: sinus shallow: canal not very short.

Mean divergence 23°; length of spire .26 inch; total length .44 inch; breadth .14 inch.

Jamaica.

latior *Adams* **Chemnitzia** Type lost.

1850, C. to C. no. 5, p. 72.

Shell moderately elongated: white: with about twenty to twenty-four prominent transverse ribs, the ends of which mostly alternate at the suture, and which are produced on the last whorl into the umbilical indentation: with numerous crowded spiral striae, which ascend the sides of the ribs without being produced over their summits: nucleus consisting of about one smooth globular whorl, with its axis nearly at right angles to the axis of the shell: spire with the outlines a little convex: whorls about nine after the loss of the nucleus, slightly convex, with a distinct suture: aperture obliquely ovate, acuminate above: labium much thickened: umbilical region moderately indented.

Mean divergence 22°; length of spire .165 inch; total length .215 inch; breadth .065 inch.

Jamaica.

latior *Mighels and Adams* **Cingula** Plate 39, fig. 2

1842, Boston Journal of Natural History **4**, p. 48, pl. 4, fig. 22.

C. testa minima, ovato-conica, laevi, pallida; anfractibus quatuor, convexis; sutura impressa; spira quam apertura longiore; anfractu postremo magno; apertura sub-ovata; operculo corneo.

Shell minute, ovate-conic, smooth, pale horn-color; whorls more than four, convex; suture much impressed; spire three-fifths of the length of the shell; last whorl broad, larger than the rest of the shell; aperture ovate-orbicular, left margin with a lamina; operculum horny.

Length .08 inch; breadth .05 inch; divergence 60 degrees.

Habitat. Casco Bay; taken from the stomach of a haddock in the spring of 1841.

It is in the cabinet of J. W. Mighels.

REMARKS. This species has a slight resemblance to *C. minuta*, Totten, in the absence of sculpture; but the spire is shorter, more pointed, and its divergence is much greater, giving a very different form to the shell. It is, moreover, a much smaller shell. It appears also to be allied to *Turbo reticulatus* Montagu, but is distinct from that species in not having as many turns by one and a half; it differs, also, in

not being "*strongly* striate, both longitudinally and transversely," and in not having the "aperture thickened by a rib." It has been found very rarely, usually in company with *C. semicostatus* and *C. arenarius* Mont.

latum *Adams* **Cerithium** Plate 38, fig. 5

1850, C. to C. no. 7, p. 122.

Shell conic above, cylindric below: whitish, with a spiral brown band occupying the suture and the upper spiral ridge, on which however the granules are white: with three spiral ridges, of which the lower one is a little larger, and very small transverse ridges, which are developed on the spiral ridges into very large nodules; anteriorly with an additional nodulous ridge: apex acute: spire with the outlines quite curvilinear in the upper three-fifths: whorls seven, of which two are nuclear and smooth, slightly convex, with an indistinct suture; last whorl nearly as large as the penult whorl, terminating rather abruptly: aperture broadly ovate; labrum well excurved, moderately thickened: canal very short and wide, nearly straight.

Divergence in the upper whorls about 40°; length of spire .07 inch; total length .09 inch; breadth .038 inch.

Jamaica.

levis *Adams* **Chemnitzia** Plate 49, figs. 3–4

1850, C. to C. no. 5, p. 73.

Shell much elongated: white: with about twenty-eight to thirty transverse rather stout ribs, which are not produced below the convexity of the last whorl; without spiral striae; with the intercostal spaces of the last whorl anteriorly depressed below the surface of the anterior region; with scarcely perceptible lines of growth anteriorly: nucleus consisting of about one and one-third smooth whorls, quite oblique: spire with the outlines nearly rectilinear: whorls nine or ten, scarcely convex, a little constricted above: aperture rhombic ovate: labium scarcely thickened: umbilical region not indented.

Mean divergence about 10°; length of spire .12 inch; total length .165 inch; breadth .04 inch.

Jamaica.

[See note under *C. exilis* C. B. Adams.]

ligata *Mighels and Adams* **Fasciolaria** Plate 38, fig. 16

1842, Boston Journal of Natural History **4**, pp. 51–52, pl. 4, fig. 17.

F. testa elongata, fusiformi, crassa, rubro-fusca, transversim costulata; anfractibus sex, convexis: spira acuminata; sutura valde impressa; apertura ovato-elongata; labro crenato: columella plicis duabus.

Shell elongated, fusiform, rather thick, of a reddish-brown [52] color, when fresh, covered with a thin and almost perfectly transparent epidermis; whorls six, well rounded, and covered with six or seven equidistant, revolving, thread-like ribs, with grooves alternating; suture well impressed; spire regularly tapering, pointed; aperture oblong-oval, polished; within of a bright reddish-brown color; canal rather narrow, nearly straight; labrum rather thin, crenulated by the ribs and grooves; columella arcuated above the middle; two distinct, oblique, delicate folds above the commencement of the canal.

Length .7 inch; breadth .3 inch; divergence 45°.

Cabinets of Dr. Gould, J. G. Anthony, J. W. Mighels, and C. B. Adams.

Habitat. Mingan, in the Gulf of St. Lawrence; taken from the stomachs of cod-fishes, by Mr. Foster, fisherman, in the summer of 1841.

REMARKS. This remarkable and truly beautiful shell is not very nearly allied to any species with which we are acquainted, unless it be that of *F. fusiformis* Valenc., from New Holland. That species, however, is much larger than our shell, is much less regularly and strongly ribbed, and has a tooth-like process on the labium, of which our shell is destitute. We suppose this to be the first and only species of the genus that has ever been found on our coast.

ligata '*C. B. Adams*' *H. and A. Adams* **Mangelia**

1853, Genera of Recent Mollusca **1**, p. 100.

[So far as we can detect this species was never described by C. B. Adams. It must be considered a nude name.—Clench and Turner.]

ligata *Adams* **Scalaria** Type lost.

1850, C. to C. no. 4, pp. 67.

Shell rather short, conic: white: varices thirteen on each whorl, rather strong, well elevated, continuous across the suture and but slightly depressed by it: whorls five or six, scarcely contiguous: aperture very slightly elongated obliquely: umbilical region with a small ridge parallel with the labium.

Mean divergence nearly 50°; length of spire .15 inch; total length .25 inch; breadth .14 inch.

Jamaica.

livido-maculata *Adams* **Monodonta** Plate 39, fig. 11

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 7.

M. t. albida, maculis pluribus lividis fuscescentibus, magnis, ornata; sutura profunda; anf. 6, subangulatis, striatis, striis latis inequalibus decurrentibus; apertura transversa, ovata; labro infra bi- vel ter-emarginato; umbilico profundo, bi- vel tri-carinato. Div. 90°; spirae long. .45 poll.; long. tot. .65 poll.; lat. .75 poll.; umbilici diam. .14 poll.

Jamaica.

maculata *Adams* **Pleurotoma** Plate 29, fig. 3

1850, C. to C. no. 4, p. 62.

Shell ovate-fusiform: white with a spiral series of large distant yellowish brown spots on the upper part of the whorls; anteriorly with a spiral band of very pale yellowish brown terminating often in a deeper spot on the labrum: with eleven or twelve transverse ridges on each whorl, which are decussated by several spiral prominent lines: apex acute: spire with the outlines moderately convex: whorls seven, angular, with a well impressed suture: aperture small, nearly in the form of a ⅋ [see plate 39, fig. 1]: labrum well excurved, denticulate within: sinus not very small, near the upper extremity of the labrum: canal short, turning to the left.

Mean divergence 31°; length of spire .1 inch; total length .17 inch; breadth .08 inch.

This species has some resemblance to *P. quadrata Rv.*

Jamaica.

maculo-striata *Adams* **Monodonta** Plate 39, fig. 13

1845, Proc. Boston Soc. Nat. Hist. **2**, pp. 6–7.

M. t. parva, crassa, intus virescente, olivacea, extra maculis subradiantibus elongatis paucis irregulariter ornata; anf. 6½, striis et lineis elevatis planulatis albo et nigro alternatim maculatis decurrentibus—instructis [7] labro intus subcrenulato, infra bi- vel tri-dentato; umbilico profundo. Operculo flavo; anf. 15. Div. 100° ad 80°; spirae long. .3 poll.; long. tot. .48 poll.; lat. .5 poll.; umbilici diam. .1 poll.

Jamaica.

megasoma *Adams* **Cerithium** Plate 37, fig. 8

1850, C. to C. no. 7, pp. 119–120.

Shell long ovate conic: mostly brownish or reddish black, white within the aperture: thick, with three small spiral rather minutely granulous ridges, of which the upper two are [120] larger and more distant, and intermediary spiral striae; anteriorly with six or seven additional feebly granulous small spiral ridges; often (?) with one broad varix on the left side: apex acute: spire with the outlines rectilinear except in the lower part: whorls about eight (?), a little convex, with a moderately impressed suture; last whorl large and rather ventricose: aperture subovate, rather acuminate at both extremities: labrum rather sharp, much thickened a little behind the edge, feebly striated within: labium with a small prominent callus above: canal very short.

Mean divergence nearly 40°; length of spire .36 inch; total length .58 inch; least breadth .25 inch; greatest breadth .3 inch.

Jamaica.

[See note under *C. variabile* C. B. Adams.]

megastoma *Adams* **Vitrinella** Plate 35, fig. 2

1850, Monograph of Vitrinella, p. 7.

V. t. depressa, transverse ovata, alba translucente, laevi, nitida apice obtusa: spira convexa anfractibus tribus, subconvexis, sutura conspicua; anf. ultimo prope aperturam maximo, regulariter rotundato.

Much depressed, transversely ovate: white, translucent: smooth and shining: apex very obtuse: spire convex, but little elevated: whorls a little more than three, moderately

convex, with a distinct suture; last whorl very large, rapidly increasing in the last part, well rounded: aperture scarcely modified by the last whorl: umbilical region very widely and deeply indented. Mean divergence about 130°; length of spire .01 inch; total length .033 inch; greatest breadth .06 inch, least breadth .045 inch.

Port Royal, Jamaica.

[Is in the genus *Teinostoma.* The shell is transparent, glassy, quite thin and globose for *Teinostoma,* with very large aperture, and a very small, sloping umbilical callus, which is flat or slightly concave, the base rising around it. The wholly superficial suture is bordered by a false sutural line by transparence; sometimes this gives the illusion of a deeply impressed suture. Diameter 2 mm., height 1.2 mm.; nearly 3½ whorls.

This was rather abundant. By the very small umbilical callus it agrees with *Pseudorotella,* as Miss Bush has noted on the label. The paratype figured is the largest in the lot. Adam's measurements were apparently from a smaller one. Except in size, the dozen specimens are all very much alike.—Pilsbry 1946, p. 5].

melanura *Adams* **Cerithium** Plate 38, fig. 10

1850, C. to C. no. 7, p. 117.

Shell like that of *C. modestum,* but snow white except the dark brown apex, much more slender, with the outlines less curvilinear, and the aperture smaller.

Mean divergence about 17°; length .2 inch; breadth .045 inch.

Jamaica.

melanura *Adams* **Rissoa** (?) Plate 33, fig. 2

1850, C. to C. no. 7, p. 116.

Shell conic, turrited: white, subtransparent, with the apex black: nearly smooth, shining, with some spiral striae, which are quite distinct anteriorly and at the lower part of the whorls of the spire, and are obsolete on the upper part of the whorls: apex acute: spire with outlines nearly rectilinear: whorls eight, quite convex, with the suture rather deep: aperture scarcely effuse: labrum thin (?), well excurved below the middle: columella straight, subtruncate. On account of

the imperfect condition of the labrum in the specimens before me, it remains doubtful, whether this shell is a *Rissoa;* it is evidently kindred to *R. tervaricosa Ad.,* whose generic character is also doubtful, the labrum being thickened by the last varix.

Mean divergence about 28°; length of spire .21 inch; total length .28 inch; breadth .11 inch.

Jamaica.

[See note under *R. tervaricosa* C. B. Adams.]

mendicarius *Mighels and Adams* **Chiton** Plate 42, fig. 6

1842, Boston Journal of Natural History **4**, p. 42, pl. 4, fig. 8.

C. testa elongata, in medio longitudinaliter ad latus irregulariter granulata, cinerea, nubeculata; areis-parum conspicuis; margine coriaceo, rubro.

Shell cinereous, with dark clouds, long-oval with obtuse dorsal ridges, surface with elevated dots or granules disposed in longitudinal lines, except towards the margin, where they are irregular and larger; no visible concentric striae; triangular areas very indistinct, outer ones small; margin coriaceous, red.

Length, 1 inch; breadth, .4 inch; width of margin, .06 inch.

Habitat. Casco Bay. This very distinct species was taken from the stomach of a haddock in June, 1841. Only a single specimen has been found, which is in the cabinet of J. W. Mighels.

[This specimen was destroyed in the Portland fire. See R.I. Johnson 1949, *Occasional Papers On Mollusks* **1**, pp. 213–218.]

minor *Adams* **Pleurotoma** Plate 31, fig. 7

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 4.

P. t. minima, solida, flavido-fusca, fasciis albis duabus aliquanto interruptis, (altera ad spiram pertinente, altera anf. ultimum infra cingente,)—cincta; anf. 6, subnodulosis, singulatim costis 9 robustis convexis, striis latis decurrentibus—instructis. Div. 25°; spirae long. .11 poll.; long. tot. .16 poll.; lat. .07 poll.

Jamaica.

minor *Adams* **Rissoa scalaroides** Plate 34, fig. 4

1850, C. to C. no. 7, p. 113.

Variety (?) *minor* is but .15 inch long.

[*Rissoa minor* C. B. Ad., *R. multicostata* C. B. Ad., *R. scalarella* C. B. Ad., and *R. scalaroides* C. B. Ad., are syn. with *Rissoina Catesbya* [=*catesbyana*] d'Orb.—Krebs 1866, p. 397.]

mirabile *Adams* **Cerithium** Plate 38, fig. 1

1850, C. to C. no. 7, p. 118.

Shell ovate conic, turrited, sinistrorsal: white, with a sutural band of blackish brown, which commences a few whorls below the light brown apex with an intervening white space: with a narrow very prominent sutural ridge, on which is the band of blackish brown, and a stouter strongly nodulous spiral ridge along the middle of the whorls, anteriorly with one or two additional slightly nodulous spiral ridges: apex very acute: spire with the outlines rectilinear in the upper half, quite fusiform in the lower half: whorls about fifteen, nearly planulate, with an indistinct suture; last whorl very much smaller than the penult whorl: aperture suborbicular, extremely small: with two small canals, which are deflected nearly at right angles to the axis of the shell, and are open only at the extremity. This extraordinary species of subgenus *Triphora* is remarkable for the minute size of the aperture.

Mean divergence to the penult whorl about 20°; length .2 inch; breadth .062 inch; length of aperture only .025 inch!

Jamaica.

modesta *Adams* **Scalaria** Plate 49, fig. 6

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 7.

S. t. subcrassa, albida, haud nitente; sutura profunda; anf. 9, costulis 11 robustis acutis retro subreclinibus, et striis decurrentibus exilissimis haud crebris — instructis; ultimo anfractu haud carinato. Div. 35°; spirae long. .275 poll.; long. tot. 4 poll.; lat. .175 poll.

Jamaica.

modesta *Adams* **Truncatella** Plate 40, fig. 17

1851, C. to C. no. 8, pp. 132–133.

Shell much elongate, ovate conic: yellowish horn color, with a white upper margin of the whorls: with about twenty-one prominent compressed ribs, and numerous spiral striae, which are interrupted by the ribs: apex truncate with the loss of ——whorls: spire with the outlines somewhat curvilinear: whorls remaining after truncation seven, moderately convex, margined above: aperture subovate, slightly angulated anteriorly.

[133] Length (after truncation) .175 inch; breadth .06 inch; length of aperture .045 inch.

Jamaica.

[This is a species of *Turbonilla.*—Clench and Turner 1948, *Johnsonia* **2,** p. 162.]

modestum *Adams* **Cerithium** Plate 39, fig. 8

1850, C. to C. no. 7, p. 117.

Shell conic, turrited, sinistrorsal: reddish black, weathering to a cinereous color: with, on the upper whorls, two, and on the middle and lower whorls three spiral ridges, which are of equal size on the lower two-thirds of the shell; and numerous transverse ridges, the intersections being well developed nodules; anteriorly with two or three additional spiral ridges, which are less strongly nodulous, and which are separated by a broad groove from a small ridge around the base of the canal: apex very acute: spire with the outlines quite curvilinear: whorls about fourteen, planulate, with the place of the suture distinguished by a somewhat larger groove; last whorl abruptly terminating: canal short, slightly turning to the right.

Mean divergence about 23°; length .225 inch; breadth .07 inch.

Jamaica.

monilifera *Adams* **Mitra** Plate 36, fig. 9

1850, C. to C. no. 4, p. 57.

Shell between a fusiform and rhomboidal shape: brownish black, with a white spiral band which is a little above the

suture, and which is small and indistinct on the upper whorls and increases with the progress of growth, and which is dilated into spots on the ribs; with rather acute longitudinal ribs, about fourteen on each whorl, and numerous excessively minute unequal raised spiral lines, which are larger at the anterior extremity, and more nodulous on the ribs; anteriorly with a broad well impressed groove, which commences in the aperture above the plaits, and contracts the general form: apex acute: spire with nearly rectilinear outlines: whorls eight or nine, rather convex, with a rather deep suture: columella with four plaits.

Mean divergence 45°; length of spire .38 inch; total length .74 inch; breadth .36 inch.

This species resembles *M. microzonias Lam.* in which the ribs are obtuse, the outlines of the spire are more convex, and the general form is narrower. It also resembles *M. leucodesma Reeve.*

Jamaica.

monilifera *'C. B. Adams' Krebs* **Pleurotoma**

1866, Annals Lyceum Natural History New York **8**, p. 397.

[*Pleurotoma monilifera* C. B. Ad., and *P. pygmaea* C. B. Ad., both from Jamaica, are *Columella Broderipii* Sowb.—Krebs 1866, p. 397.]

[Krebs probably meant *Columbella monilifera* Sowerby. *Pleurotoma pygmaea* C. B. Adams is certainly not a *Columbella*—Clench and Turner.]

multicostata *Adams* **Chemnitzia** Plate 49, fig. 7

1850, C. to C. no. 5, pp. 74–75.

Shell moderately elongated: white, or tinged with yellowish brown: with about thirty-four to thirty-eight [75] slender transverse ribs, which become obsolete on the anterior surface; in the intercostal spaces, with rather coarse distant spiral raised lines, which traverse the ribs only at their anterior extremities on the last whorl: nucleus consisting of little more than one smooth whorl, very oblique: spire with the outlines slightly convex: whorls nine besides the nucleus, scarcely convex, with a well impressed suture: aperture

ovate, subacute above: labium slightly thickened: umbilical region scarcely indented.

Mean divergence about 12°; length of spire .125 inch; total length .165 inch: breadth .045 inch.

Jamaica.

[*Chemnitzia multicostata* C. B. Ad., and *C. substriata* C. B. Ad., may, when a sufficient number of specimens are at hand, prove to be synonymes.—Krebs 1866, p. 395.]

multicostatus *Adams* **Chiton** Plate 42, fig. 3

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 8.

C. t. praelonga, intus rubella, extus pallide virente, punctis albis et atro-virentibus, lineaque dorsali pallida ornata; areis lateralibus perelevatis, costatis, costis 6 ad 8 nodosis; areis dorsi costulis 20 gracilibus, compressis,—instructis; margine squamoso, alternatim virente alboque. Long. .9 poll.; lat. .42 poll.

Jamaica.

multicostata *Adams* **Rissoa** Plate 33, fig. 4

1850, C. to C. no. 7, pp. 114–115.

Shell ovate conic, turrited: white: with, on each whorl, about twenty-eight very regular ribs, which are produced on the last whorl to the anterior extremity, and numerous distinct spiral striae on the anterior half of the last whorl, which impress the summits of the ribs; on the rest of the shell between the ribs are [115] very faintly impressed microscopic spiral striae: apex acute: spire with the outlines moderately curvilinear: whorls seven, quite convex, with a well impressed suture: aperture deeply effuse: labrum much excurved and very thick. Conf. *Rissoina elegantissima* Orb. Moll. du Cuba, Tab. XII. f. 27–29.

Mean divergence about 26°; length of spire .12 inch; total length .18 inch; breadth .07 inch.

Jamaica.

[Is a *Rissoina.*—Desjardin 1949, *Jour. de Conch.* **89,** p. 194.]

multilineata *Adams* **Pleurotoma** Plate 29, fig. 10

1845, Proc. Boston Soc. Nat. Hist. **2,** pp. 3–4.

P. t. minima, flavido-fusca, albo-multilineata; anf. 6, sing-

ulatim costis 8 ad 10 latis, ad basim expansis, et striis creberrimis decurrentibus inequalibus—instructis; sutura profunda; sinu magno; canali brevissimo. [4] Div. 35° ad 25°; spirae long. .11 poll.; long. tot. .18 poll.; lat. .08 poll.

Jamaica.

muricoides *Adams* **Fusus** Plate 39, fig. 9

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 3.

F. t. parva; anf. 6, singulatim costis 9 vel 10 propinquis, et striis decurrentibus inequalibus partim granosis—instructis; apertura violacescente, angusta; labro crasso, intus albo-denticulato; labio subrugoso; canali brevi. Div. 40°; spirae long. .32 poll.; long. tot. .6 poll.; lat. .25 poll.

Jamaica.

[*Fusus muricoides* C. B. Ad., is a *Ricinula.*—Krebs 1866, p. 396.]

muricoides *Adams* **Mangelia** Plate 31, fig. 11

1850, C. to C. no. 4, p. 65.

Shell fusiform and slender: pure white: with six narrow subacute prominent ribs on each whorl, which are sinuated posteriorly on the right side, and which are continuous along the spire like a *Murex;* with very numerous microscopic spiral striae in the intercostal spaces: apex acute: spire with the outlines nearly rectilinear: whorls six, slightly convex, with a lightly impressed suture: last whorl gradually attenuated below into a wide canal.

Mean divergence 32°; length of spire .09 inch; total length .18 inch; breadth .07 inch.

Jamaica.

mutabile *Adams* **Cerithium** Plate 37, fig. 9

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 5.

C. t .parva, subtenui, nigra, rubescente, irregulariter albomaculata; sutura profunda; anf. 9, haud multum convexis, plicis decurrentibus pluribus, 3 majoribus, et plicis longitudinalibus inequalibus, intersectionibus nodiferis—instructis; canali brevissimo. Div. 33°; spirae long. .22 poll.; long. tot. .22 [sic] poll.; lat. .15 poll.

Jamaica.

nanum *Adams* **Cerithium** Type lost.

1850, C. to C. no. 7, pp. 117–118.

Shell conic, turrited, sinistrorsal: wax brown, [118] dark at the apex, sometimes with a white space next below the apex, followed by a white spiral band: with, on the upper whorls, two, and on the lower whorls, three nearly equal spiral ridges, and many transverse slender ridges, the intersections being well developed nodules; anteriorly with two additional smaller less strongly nodulous spiral ridges: apex very acute: spire with the outlines nearly rectilinear: whorls about nine, planulate, with the place of the suture distinguished by a somewhat larger groove; last whorl terminating very abruptly: aperture suborbicular, rather small: canal short, nearly straight.

Mean divergence about 20°; length .11 inch; breadth .08 inch.

Jamaica.

newtoniana *Adams* **Corbula** Plate 47, figs. 9–10

1852, C. to C. no. 12, p. 240.

C. t. obovata-rhombica, tenui, (inequivalvi?) perinequilaterali, antice brevissima, antice et postice excurvata; margine ventrali recta: alba: concentrice irregulariter et exile striata: apicibus parvis, haud multum editis, haud involutis: umbonibus subangulatis; dentibus gracilibus. Long. 12′′′.7; alt. 8′′′.6; lat. 7′′′.9.

Shell between an obovate and rhombic form, thin, (inequivalve?) very inequilateral, the anterior part being very short, anteriorly and posteriorly well rounded; ventral margin straight: white: with fine irregular striae of growth: beaks small but somewhat prominent, acute, not involute: umbones with an obtuse angle extending diagonally through the posterior half of the disk; teeth prominent, not robust.

Length .5 inch; height .34 inch; breadth .31 inch.

Station.—Unknown.

Habitat.—St. Thomas; T. Bland! in sched. in Mus. Amh. [erst]. We have only 4 specimens of the left valve.

Neritina

All species, originally described by C. B. Adams in this

genus will be included under land and freshwater genera of Jamaica.

nigrescens *Adams* **Natica jamaicensis** var. Type lost.

1850, C. to C. no. 7, p. 112.

Variety *nigrescens* is more concave [than *jamaicensis*] around the umbilicus, is rather larger and thicker, and has the callus and interior of the aperture nearly or quite black.

Jamaica.

nigrescens *Adams* **Pleurotoma** Plate 29, fig. 11

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 3.

P. t. parva, atro-violacescente; anf. 8, sulco sinum sequente, exilissime decussato—instructis, ceterum granulosis, decussatis; labro crassissimo; sinu haud multum profundo; canali brevissimo. Div. 30°; spirae long. .2 poll.; long. tot. .3 poll.; lat. .11 poll.

Jamaica.

nigrocinctum *Adams* **Cerithium** Plate 38, figs. 11, 14

1839, Boston Journal of Natural History **2**, pp. 286–287, pl. 4, fig. 11.

"C. testa parvula, conico-cylindraca, granulosa, nigro-rubra; anfractibus tredecim, sinistrorsum volventibus; spira elongata, acuta; sutura subduplicata; apertura subelliptica, parva; cauda recurvata.

"DESCRIPTION. Shell blackish red, conic-cylindrical, with three revolving series of granules; the middle series equally distant from the others, and, on the whorls of the lower half of the shell, of equal size, but diminishing above, and wanting on the upper fifth; the upper row is less than the lower one on the whorls of the upper fourth or fifth part of the shell, and is wanting upon several of the first whorls; the lower series is also wanting upon the extreme apicial whorls, but, in descending from the apex, appears before the others; the granules are formed by the revolution of two impressed lines across numerous longitudinal ribs or rugae; spire elongate, very acute; whorls about thirteen; suture rather broad; impressed, divided by a revolving somewhat granulous black ridge, which in the progress of growth gradually changes its situation, and forms the lower side of the last whorls, and another similar revolving ridge appears in its place; an im-

pressed line upon each side of the sutural ridge, and two others emergent from the aperture, are continued around the lower half of the last whorl; *aperture* subelliptical, less than one-fifth the length of the shell; *labrum* deeply concave; *columella* prominent below, black; *labium* regularly arched, surpassing the labrum, notched by the revolving impressed lines; *canal* recurved, about one third as long as the aperture.

Length, .3 inch; breadth, .08 inch.

[287] Inhabits Dartmouth harbor [Massachusetts], and is found clinging to sea-weed a few feet below low water mark. associated with the *Cerithium reticulatum* Totten, and *Buccinum lunatum* Say.

Cabinet of the Boston Society of Natural History, of Dr. A. A. Gould, of Prof. Hitchcock, and my own.

REMARKS. July 5th, of the present year, I found an immature specimen of this species in the harbor of Dartmouth, and at a subsequent visit to the same locality, obtained about two dozen specimens in various stages of growth.

This species is easily distinguished from *Cerithium reticulatum,* not only by the obvious character of heterostrophy, but by others more important, and too evident to require remark. It is more nearly allied to the *C. perversum,* Lam., from which it differs in the black sutural ridge, and in the middle series of granules, which in the *C. perversum* is nearer to the upper than to the lower series. It differs from the *Murex adversus* of Montague and Turton, (*Cerithium adversum,* Brown,) in having the canal recurved, the whorls very distinctly defined by the impressed suture, and in the color, which, in the *Cerithium adversum,* is opaque light brown; the figure of Brown differs also in other respects from our shell.

nitens *Adams* **Fusus** Plate 39, fig. 17

1850, C. to C. no. 4, pp. 60–61.

Shell ovate fusiform: white, with spiral series, [61] of more or less waved transversely much elongated spots of brown; on the last whorl are two more series of shorter spots of the same color: with a varicoid rib a little behind the labrum; with rather coarse revolving striae anteriorly; otherwise

smooth and shining: apex acute: spire with the outlines slightly convex: whorls eight or nine, moderately convex: aperture rather long, subelliptical, acute above: labrum sharp: canal very short, and very wide.

Mean divergence 38°; length of spire .29 inch; total length .57 inch; breadth .24 inch.

Jamaica.

[*Fusus nitens* C. B. Ad., described from a single Jamaica specimen, is not, perhaps, a *Fusus*.—Krebs 1866, p. 396.]

nitens *Adams* **Tellina** Plate 44, figs. 3-4.

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 10.

T. t. nitida, rosacea, zonis pallidis ornata; parte posteriore elevata, infra angulata; dentibus lateralibus anterioribus obsoletis. Long. .75 poll.; alt. .4 poll.; lat. .17 poll.

Jamaica.

nivea *Adams* **Marginella** Plate 32, fig. 13

1850, C. to C., no. 4, p. 56.

Shell obovate, white, translucent, with numerous spots of opaque white: smooth and shining: apex acute: spire small, short, vitreous, wholly opaque white: whorls about three and one-half: aperture long, effuse above: varix stout, produced to the apex: columella with four prominent plaits.

Mean divergence about 100°; length of spire .06 inch; total length .37 inch; breadth .22 inch.

This species resembles *M. pruinosa* Hinds, but is much smaller, more regularly obovate, the spire is shorter, and the coloration is different except in the opaque white spots.

Jamaica.

[See note under *M. albida* C. B. Adams.]

nodata *Adams* **Pleurotoma** Plate 29, fig. 14

1850, C. to C. no. 4, p. 64.

Shell fusiform, elongated: brown, with white tubercles: with a spiral series of large obtuse undivided scarcely elongated tubercles, which are connected by a small elevated spiral line; whorls slightly shouldered; anteriorly with a few distant elevated spiral lines: apex acute: spire with the outlines nearly rectilinear: whorls seven, a little convex, with

a moderately impressed suture: aperture rather narrow: sinus rather shallow: canal not very short. This species resembles *P. albinodata Rv.*, which has the tubercles divided by a deeply impressed spiral line.

Mean divergence 33°; length of spire .2 inch; total length .31 inch; breadth .1 inch.

nodulosa *Adams* **Purpura** Plate 32, fig. 10

1845, Proc. Boston Soc. Nat. Hist. **2**, pp. 2–3.

P. t. solida, parva, rhombica; anf. 5, nodulis seriatis, et striis subimbricatis decurrentibus, aterrimis, maculis albidis inter secundae et quartae serierum nodulos—[3] ornatis; labro incrassato, intus 4-denticulato. Div. 45°; spirae long. .32 poll.; long. tot. .62 poll.; lat. .32 poll.

Jamaica.

[*Ricinula nodulosa* C. B. Ad., is *R. ferruginosa* Rv.—Krebs 1866, p. 397.]

[This species is in the genus *Sistrum*, Clench 1947, *Johnsonia* **2**, p. 91.]

obeliscus *Adams* **Chemnitzia** Type lost.

1850, C. to C. no. 5, pp. 72–73.

Shell much elongated: white: with twenty-six to thirty transverse prominent ribs, which are not produced below the convexity of the last whorl; with numerous crowded spiral striae in the intercostal spaces, and a little above the middle of the whorls a broad smooth depressed spiral line, and similar lines on the middle and anterior of the last whorl: spire with the outlines rectilinear: whorls eleven after the loss of the nucleus, planulate, [73] with a very distinct suture: aperture ovate-rhomboidal: labium slightly thickened: umbilical region not indented.

Mean divergence about 10°; length of spire .21 inch; total length .25 inch; breadth .05 inch.

Jamaica.

[*Chemnitzia obeliscus* C. B. Ad., is described from three pieces of different and very imperfect individuals.—Krebs 1866, p. 395.]

obesa *Adams* **Litiopa** Type lost.

1850, C. to C. no. 5, p. 71.

Shell ovate: of a uniform brown wax color, subtransparent: smooth: apex obtuse: spire with the outlines moderately convex: whorls five, rather convex, with a distinct suture; last whorl large: aperture large, obliquely subrhomboidal, effuse, but scarcely produced anteriorly: labrum very thin, retreating above, scarcely reflected: columella slightly arcuate.

Mean divergence about 55°; length of spire .08 inch; total length .185 inch; breadth .11 inch.

Jamaica.

obesum *Adams* **Buccinum** Plate 32, fig. 11

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 7.

B. t. parva, lata, fusiformi, supra et infra acuminata, atra, albo-fasciata; anf. 5, costis parvis prominulis, et striis decurrentibus haud costas superantibus—instructis; labro incrassato sed acuto, intus 6-denticulato, supra sinuato; labio subcalloso. Div. 45°; spirae long. .11 poll.; long. tot. .21 poll.; lat. .11 poll.

Jamaica.

[Adams later considered this to be a *Columbella*. — C. to C. no. 4, p. 55, 1850.]

occidentalis *Mighels and Adams* **Trochus** Plate 40, fig. 13

1842, Boston Journal of Natural History **4**, pp. 47–48, pl. 4, fig. 16.

T. testa, pallida, imperforata, anfractibus septem, convexis; carinis pallide fuscis; infra laevi; sutura impressa; columella callosa.

Shell rather small, somewhat solid, sub-translucent, pale horn color, with light brown revolving carinae, of which there are three on the upper whorls, and four to six on the lower one; whorls seven, convex; suture distinct; spire three-fifths of the length of the shell; apex acute; last whorl with a smooth space between the carinae and two or three course revolving striae around the umbilical region; aperture moderately depressed, transversely ovate; labrum crenulated by the carinae; columella callous; umbilical region indented.

Height .5 inch; greatest basal diameter .43 inch; divergence 60 degrees.

Cabinets of Bost. Soc. Nat. Hist., G. B. Sowerby, Mons. Largillier, J. W. Mighels and C. B. Adams.

[48] *Habitat.* Casco Bay; taken from stomachs of haddock, in the summer of 1840, and subsequently.

REMARKS. This is the only species of true *Trochus* that has ever been discovered on this Atlantic coast. It is not nearly allied to any species with which we are acquainted, unless we regard *Turbo* (*Margarita*) *cinereus*, Couth.—*Trochus costalis*, Loven, as a true *Trochus.* A careless observer would be likely to confound them; but besides several other essential points of difference, our shell is easily distinguished from all the known species of *Margarita,* by the absence of an umbilicus.

occulta *Mighels and Adams* **Bulla** Plate 32, fig. 13

1842, Boston Journal of Natural History **4**, p. 54, pl. 4, fig. 11.

B. testa parva, ovato-cylindrica: spira occulta: labro supra elevato, medio recto; apertura sub-angusta, infra lata, rotundata.

Shell small, of a dingy white color, ovate-cylindrical, covered with very minute transverse striae, and with indistinct longitudinal striae of growth; spire concealed; labrum extends a little below the spire, nearly *straight* above the *centre,* regularly rounded below and at the base; aperture narrow at the upper part; rather broad at the base.

Length 1/5 inch; breadth 3/20 inch.

Cabinets of Bost. Soc. Nat. Hist., Amherst and Middlebury Colleges, J. W. Mighels, and C. B. Adams.

REMARKS. If not identical with, this shell is the analogue of, *B. triticea* Couth. It however differs from that species in being proportionately wider. It is very scarce.

[Fossil, Westbrook, in the vicinity of Portland, Maine. The lectotype, MCZ 156452, from the Adams collection, is too poor a specimen to be photographed. We have made a copy of the original figure.]

ornata *Adams* **Lucina**

1847, Proc. Boston Soc. Nat. Hist. **2**, p. 228 [nude name].

[Is a synonym of *Lucina antillarum* Reeve, *non L. ornata*

Reeve 1850 according to C. B. Adams 1852, *Contributions to Conchology* no. 12, p. 243.]

ovalis *Adams* **Pedipes** Plate 41, fig. 14

1849, C. to C. no. 3, pp. 41–42.

Pedipes ovalis may be a variety of *P. quadridens* Pfr.; but when full grown it is oval; the spiral ribs on the last whorl are broad and approximate, and on the whole shell they are smooth, without the irregular microscopic granulations of *P. quadridens:* [42] the color is yellowish brown or waxen: the aperture is similar to that of Dr. Pfeiffer's species, but the tooth of the right side is less conspicuous.

Length .12 inch; breadth .09 inch: of *P. quadridens*, length .16 inch; breadth .135 inch.

Jamaica.

ovata *Adams* **Cardita** Plate 48, figs. 8–9

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 9.

C. t. ovata, lamellis decumbentibus inequalibus et striis radiantibus profundis lamellas persecantibus—ornata; lamellis posterioribus haud insectis, striatis; margine vix crenulato.

Jamaica.

ovuloides *Adams* **Columbella** Plate 41, fig. 4

1850, C. to C. no. 4, p. 53.

Shell long obovate: yellowish brown, rarely blackish brown, irregularly mottled with large angular spots of white, often with a band of white around the middle of the last whorl, with the apex white: with numerous fine spiral striae, of which those that are on the upper part of the whorls and at the anterior extremity of the shell are coarser; with excessively minute unequal striae of growth: apex acute: spire with very concave outlines: whorls nine, the penult whorl only being very convex, with a well impressed suture, which near the end is rapidly curved upwards towards the apex: aperture very long and linear: labrum much produced in a broad [54] curve along the middle, incurved, rather sharp but stout, denticulate; within: labium with a deposit of moderate thickness: columella somewhat produced.

Mean divergence of the spire 50°; length of the spire .22 inch; total length .7 inch; breadth .26 inch.

HABITAT—Bahamas. Fine specimens were collected on Turks Is. by Dr. A. Barrett of Pittsfield, Mass. This beautiful shell is well known in our collections, but I cannot learn that it has been described.

ovuloides *Adams* **Odostomia** Plate 40, fig. 4

1850, C. to C. no. 7, pp. 109–110.

Shell rather long-ovate: white: smooth and shining, with a scarcely impressed spiral line next below the suture: apex subacute: spire with the outlines moderately convex: whorls five and one-half, slightly convex, with a lightly impressed [110] suture; last whorl long and fusoid: aperture ovate, scarcely effuse anteriorly: columellar plait quite oblique.

Mean divergence about 30°; length .115 inch; breadth .055 inch.

Jamaica.

papillosus *Adams* **Chiton** Plate 42, fig. 4

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 9.

C. t. minima, lata, virente, albido atroque crebre maculata, papillosa; areis a costula gracili discretis; margine exilissime squamuloso, alternatim virente albidoque. Long. .21 poll.; lat. .13 poll.

Jamaica.

parva *Adams* **Thetis** Plate 44, figs. 5–6

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 9.

T. t. minima albida, lamellis elevatis robustis concentricis ornata; umbonibus parvis, acutis; margine supra angulato, alibi rotundato; pallii impressione simplici. Long. .16 poll.; alt. .14 poll.; lat. .09 poll.

Jamaica.

See *Gouldia*.

parvus *Adams* **Triton** Plate 40, fig. 12

1847, Proc. Boston Soc. Nat. Hist. **2**, p. 228 [nude name]; 1850, C. to C. no. 4, pp. 59–60.

Shell elongate, subfusiform: dingy white on the spire with

irregular pale brown stains, on the last whorl pale brown, with two revolving whitish stripes of which the outer one is linear; sometimes the shell is wholly brown except the fascia; with longitudinal narrow rounded ribs, of which there are 10 or 12 on each whorl including the varices, which are not easily distinguished from the ribs, and which are distant a little more than a semi-revolution; with numerous spiral unequal elevated lines, which are continuous over the ribs, and of which the anterior ones are larger and granose: apex acute: spire with slightly convex outlines: whorls seven, convex, slightly more inflated above the middle, with a well impressed suture: aperture subelliptical, with a small well defined gutter posteriorly: labrum crenulate within: labium a little thickened: canal short, wide, a little recurved: with an umbilical indentation.

Mean divergence 35°; length of spire .25 inch; total length .47 inch; breadth .21 inch.

This species was described in Mss. five years since, but being in- [60] formed that it was identical with *T. angulatus Reeve* I suppressed the description. It proves to be quite different.

Jamaica.

pauperculus *Adams* **Murex** Plate 39, fig. 16

1850, C. to C. no. 4, p. 60.

Shell elongated, obliquely subfusiform: whitish, within the aperture yellowish: with three not very stout varices on each whorl, and slender intermediary varicoid ridges; with a few distant spiral ridges, the intersections being nodulous: apex subacute: spire with the outlines a little convex: whorls six, quite convex, with a deep suture: aperture elliptical: canal short, rather wide and recurved.

Mean divergence 42°; length of spire .33 inch; total length .71 inch; breadth .3 inch.

Jamaica.

[This species is in the genus *Aspella.*—Clench and Turner.]

pectinata *Adams* **Lucina** Plate 46, figs. 5–6

1847, Proc. Boston Soc. Nat. Hist. **2**, p. 288 [nude name]; 1852, C. to C. no. 12, p. 245.

L. t. *Lucinae pectini* affini, sed perobliqua, postice declivi, exilissime concentrice striata; costis radiantibus latioribus, pluribus [246] bi- vel tri-furcatis. Long. 18.8 millim.; alt. 13 millim.; lat. 10 millim.

It must also resemble *L. obliqua* Reeve, said to have been collected by Benson at Chusan. But in that shell, the concentric and radiant lines are described in the same terms, and the posterior margin is figured as broadly subtruncate.

Habitat.—Jamaica; C.B.A.! It is found, rarely among collections of West Indian shells.

pectinella *Adams* **Lucina** Plate 46, figs. 9–10

1852, C. to C. no. 12, p. 246.

L. t. suborbiculari, margine dorsali subrecta, marginibus alteris rotundatis; costis radiantibus planulatis, subapproximatis, nonnullis anguste bifurcatis, ad extremitates nullis; lineis elevatis concentricis regularibus, costas superantibus; striis concentricis intermediis microscopicis; lunula conspicua, cordata, subelongata; limbo interno a costis pectinato; dentibus lateralibus magnis. Long. 7.8 millim.; alt. 8.1 millim.; lat. 2.8 millim.

Dredged in 4 or 5 fathoms, in soft mud, in the harbor of Kingston, Jamaica; C.B.A.!

pellucida *Adams* **Lima** Plate 43, figs. 8–9

1846, Proc. Boston Soc. Nat. Hist. **2**, p. 103.

L. t. tenuissima, hyalina, costulis quadraginta tenuissimis instructa.

Long. .41; alt. .63; lat. .25 poll. *L. loscombii* Sowb., affinis. Hab. Jamaica.

pilula *Adams* **Lucina** Plate 46, figs. 11–12

1852, C. to C. no. 12, p. 246.

L. t. *Lucinae divaricatae* affini; sed minore, crassiore, globosa; apicibus prominentibus, haud obliquis; lunula parva, subdepressa, subcordata; striis divaricatis crebris, radiantibus microscopicis, evanescentibus; limbo crenulato. Long. 10.7 millim.; atl. 9.9 millim.; lat. 7.3 millim.

The lunule is not elongate as in *L. Americana,* and the

marginal crenulations are stronger, and the depressions between them are prolonged into the interior.

Habitat.—We have received 2 specimens from M. Krebs as West Indian shells.

plicata *Adams* **Pleurotoma** Plate 31, fig. 1; Plate 32, figs. 5–6

1840, Boston Journal of Natural History **3**, pp. 318–320, pl. 3, fig. 6.

P. testa parva, crassa, ovato-fusiformi, albido-fusca, striis et plicis decussata; epidermide tenui; anfractibus sex; sutura valde impressa; apertura ovata; labro arcuato, sinu lato; cauda brevi; columella acuta.

[319] Shell small, thick, ovate-fusiform, cinereous brown through (and light or dark brown beneath) the epidermis; epidermis membranous, thin, dull, cinereous; whorls six to seven, convex; suture deeply impressed; spire five-ninths of the length of the shell, longitudinally and coarsely plicate below the first or second whorls (which are smooth), decussated by transverse small ribs or coarse striae; body-whorl larger than the spire, sculptured as the upper whorls, with 10 to 12 longitudinal ribs, extending to the canal, either continuous or alternating with those on the penultimate whorl, with 13 to 15 transverse striae on the back of the body whorl, oblique on the canal, very oblique on its left side; aperture elongate-ovate, the line of its length at an angle of about 30° with the axis of the shell four-ninths of the length of the shell; labrum brown or yellowish-brown internally, somewhat arcuate, much thickened by the last plication, beneath which is a groove, reaching from the sinus to the canal, and sharpening the edge; sinus a little below the junction of the labrum with the last whorl, rounded and broad at the bottom, occupying one-fifth of the length of the labrum, in mature specimens nearly as deep as broad; canal short; columella somewhat excurved, acutely terminated; labium in its upper third arching over to meet the labrum; umbilicus wanting; operculum unknown.

Average size; length, .5 inch; breadth, .25 inch; largest specimen, .52 inch by .21 inch.

Cabinets of the Bost. Soc. Nat. Hist., of Middlebury College, of Mr. C. F. Shiverick, of New Bedford, and my own.

[320] Station. This species lives in mud below low water mark.

Habitat. Harbour of New Bedford.

Remarks. During the summer of 1839, two dredging machines were worked in the harbour of New Bedford. This species was found in the mud thrown up, with several others rarely or never found above low-water mark. Mr. Shiverick has found it at Clark's Cove, in Dartmouth. It resembles *Fusus harpularius*, but the presence of a very distinct sinus, as well as the coarseness of the revolving striae, readily distinguishes it.

[Name changed to *Pleurotoma plicosa* C. B. Adams.]

plicosa *Adams* **Pleurotoma** Plate 31, fig. 1; Plate 32, figs. 5–6

1850, C. to C. no. 4, p. 54.

Pleurotoma plicata Ad. Bost. Journ. Nat. Hist. III. p. 318. pl. 3. f. 6. This name having been pre-occupied by Lamarck for a fossil shell, my species may take the name of *Pleurotoma plicosa.*

praecognita *Adams* **Nerita** Plate 41, fig. 10

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 7.

N. t. crassa, olivacea, albo-marmorata; anf. 3, superioribus convexiusculis; ultimo costulis rotundatis crebris, striatis, numerum (a 20 ad 25) et latitudinem in diversis exemplis disparibus—ornato; labro acuto, a costulis eleganter pectinato, intus juxta marginem polito, interius crasso et crenulato, et supra infraque bituberculato; labio medio excavato et bidentato, alibi plicato vel noduloso. Operculo pallide murino, creberrime papilloso. Long. 1.05 poll.; lat. 1.3 poll.

Jamaica.

princeps *Mighels and Adams* **Cemoria** Plate 38, fig. 15

1842, Boston Journal of Natural History **4**, pp. 42–43, pl. 4, fig. 9.

C. testa alba, procera, costulata, rima intus in canalem producta, fornice obtectus; fornice lateraliter testae alis adjuncto; apertura ovata, crenulata.

Shell clear white, elevated, conical, with twenty five to thirty slight, obtuse ribs, and intervening small ones, the dividing striae minutely punctured; summit decumbent,

with a single minute whorl; apex visible on the right side; anterior slope rectilinear, posterior slope sub-rectilinear; from the rima within, a narrow groove with callous sides proceeds anteriorly, covered in part by a flattened arch, which arises [43] from the summit of the rima, and is strengthened above by a plate uniting it with the sides of the shell; aperture ovate, slightly crenate.

Length, .46 inch; width, .33 inch; height, .35 inch.

Cabinets of G. B. Sowerby, J. W. Mighels, and C. B. Adams.

Habitat. This shell was taken from the stomach of a haddock, by Mr. Newbegin, a fisherman, in July, 1840, seventy five to one hundred miles off the mouth of Kennebec river, on fishing ground called by the fishermen "*Monhegan Falls.*" The water at that place is from forty to seventy five fathoms in depth.

REMARKS. This very singular and truly splendid species resembles *C. noachina* Linné, but differs from that shell in the following characters; in *C. noachina* the ribs are more elevated, the corresponding interior sulci are much more obvious; posterior slope much and regularly curved, shell smaller; proportionately longer, not so high, interior arch without wings. Only four specimens have been found.

[Is *Puncturella noachina* Linné.—I. P. Farfante 1947, *Johnsonia* **2,** p. 138.]

princeps *Adams* **Rissoa** Plate 34, fig. 1

1850, C. to C. no. 7, p. 116.

Shell ovate conic, turrited: white: with very numerous crowded slender ribs, which become obsolete on the last whorl, and strong crowded spiral striae, which become larger on the last whorl: apex acute: spire with rectilinear outlines: whorls ten, nearly planulate, slightly contracted next below the suture, which is moderately impressed: aperture very effuse: labrum very much advanced a little below the middle, well excurved, moderately thickened. This species resembles *R. albida Ad.,* but that shell is much smaller, and the outlines of its spire are curvilinear.

Mean divergence about 30°; length of spire .25 inch; total length .37 inch; breadth .14 inch.

Jamaica.

[Is a *Rissoina.*—M. Desjardin 1949, *Jour. de Conch.* **89,** p. 202.]

producta *Adams* **Jaminia** Plate 41, figs. 8–9

1840, Boston Journal of Natural History **3,** pp. 322–323, pl. 3, fig. 8.

J. testa parva, albida, cylindracea; epidermide fusca, nitida, erosa; anfractibus octo; sutura impressa; spira producta, truncata; apertura sub-ovata, supra contracta, infra late rotundata; columella uniplicata.

Shell small, moderately thick, ashy white beneath the epidermis, conico-cylindric, with fine irregular striae of growth; epidermis brown, smooth, closely adhering, eroded chiefly in the incremental striae; whorls eight or eight and a half, slightly convex; suture very distinct, impressed; spire about three-fourths of the length of the shell, or slightly more, truncated at tip; last whorl about one third of the bulk of the spire; on two or three of the last whorls may sometimes be seen an indistinct impressed revolving line, just below the suture, and also more rarely on the middle and lower part of the whorls; aperture with its plane at an angle of about 16° with the length of the shell, sub-ovate, contracted above, broadly rounded below; labrum rather thin, regularly arched, but more so in the lower half; columella with a single, rather obtuse plait; labium with a slight lamina, which is often obsolete; no umbilicus; operculum very small, thin, horny, nearly transparent, sub-triangular, apex on one side.

Length, .25 inch; greatest breadth, .07 inch. Of the operculum; length, .033 inch; breadth, .025 inch.

Cabinets of Bost. Soc. Nat. Hist.; of Middlebury College; of Dr. A. A. Gould, of Boston; of Prof. Hitchcock, of Amherst; and my own.

Habitat. A cove on the east side of Fairhaven. [323] It was found near high-water mark, on a beach of fine gravel, but, as most of the shells were destitute of the animal, it may be doubted whether this is their proper station.

Remarks. This species was discovered in September, 1839, in company with great numbers of the *Venus gemma,* Totten, and many of the *Jaminia fusca,* Nob. It has a striking resemblance to the latter species, but is much more elongate, has two more whorls, the body whorl is much less

inflated, and the suture is rather more deeply impressed.

proxima *Adams* **Natica** Plate 41, fig. 13

1850, C. to C. no. 7, p. 111.

Shell obliquely ellipsoidal: mostly fawn color, or livid, white anteriorly, and on the callus, with an ill defined dingy white stripe next below the suture; anteriorly with a circle of transverse curved brown flames; above the middle of the last whorl, with a narrow pale revolving stripe, on which are rather distinct sagittate spots of dark brown; sometimes next below the middle is a similar but more faintly and closely spotted line: thin, smooth, and shining, with the oblique infrasutural striae rather feeble: apex subacute: spire prominent, with the outlines moderately curvilinear: whorls five, quite convex, with a well impressed suture: aperture not very wide, ovate but compressed in the left outline: labial deposit rather thick, but subtransparent: umbilical callus about half filling the umbilicus in the lower and right side: umbilicus rather narrow, deep, partially concealed by the labial deposit.

This species resembles the young of *N. canrena,* but the spire is longer; the aperture is narrower, and the form consequently not ovate: the umbilical callus is rather smaller; the shell is thinner: the plan of coloring, although similar, is constantly different.

Mean divergence about 120°; length of aperture about .52 inch; total length .7 inch; breadth .6 inch.

Jamaica.

pulchella *Adams* **Lucina** Types lost.

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 10.

L. t. parva, subcordata, rubella, albomarginata, striis obliquis parallelis, posterioribus undatis, anterioribus divaricatis—ornata; dentibus lateralibus robustis. Long. .28 poll.; alt. .28 poll.; lat. .18 poll.

Jamaica.

[Adam's types are not in existence. This name does not appear in his catalogue of his collection which he published in 1847. It would appear that he detected that this species was

a synonym and changed the labels accordingly.—Clench and Turner.]

pulchellum *Adams* **Buccinum** Plate 32, fig. 12

1851, C. to C. no. 8, pp. 130–131.

Shell ovate fusiform: pale yellowish brown, with the spiral ridges dark reddish brown, ex- [131] cept on the upper whorls: with twelve spiral prominent cord-like ridges, half of which appear on the spire, decussated by much less prominent regular transverse ridges, with the intersections well developed into nodules: apex acute: spire with the outlines moderately curvilinear: whorls five, rather convex, with the suture moderately impressed; last whorl but little ventricose: aperture rather narrow and sinuous; lip slightly thickened, not denticulate within, (in old shells?) with the notch of medium size.

Mean divergence about 40°; length .145 inch; breadth .06 inch; length of aperture .06 inch.

Jamaica.

pulchellum *Adams* **Cerithium** Type lost.

1850, C. to C. no. 7, p. 121.

Shell turrited, conic above, subcylindric in the lower three-fifths, conic above: snow white, with a spiral band of bright brown, which commences several whorls below the apex, and is placed on the inferior spiral ridge: with two spiral ridges, of which the upper one is larger, and is double on the lower whorls; with small transverse ridges, which are developed on the spiral ridges into rather large nodules; anteriorly with two other spiral ridges, of which the upper one is subnodulous: apex acute; spire with the outlines slightly concave in the upper half and slightly convex in the lower half, often truncate with the loss of five whorls: whorls about eleven, a little convex, with a well impressed suture; last whorl a little smaller than the penult whorl, terminating obtusely: aperture suborbicular: labrum well excurved, moderately thickened: canal very short and wide, nearly straight.

Divergence in the upper whorls about 22°; length of spire .135 inch; total length .17 inch; breadth .045 inch.

Jamaica.

pulchellus *Adams* **Triton** Plate 40, fig. 8

1850, C. to C. no. 4, p. 60.

Shell fusiform: reddish at the apex, pale yellow, with spiral unequal bands of gray, of which there are two on the whorls of the spire and two more on the last whorl; with the aperture more or less orange red: decussate with many small unequal longitudinal and spiral ridges, with unequal nodulous intersections; varices five, last one very large: apex acute: spire with the outlines nearly rectilinear between the varices: whorls eight, rather convex, subangular at or a little above the middle, with a well impressed suture: aperture subelliptical, somewhat acuminate at both extremities: labrum grooved within under the last varix, denticulate on both sides of the groove: labium transversely wrinkled: canal moderately bent to the left and upwards.

Mean divergence 45°; length of spire .33 inch; total length .72 inch; breadth .36 inch.

This shell resembles a small and slender *T. chrysostoma.*

Jamaica.

[*Triton pulchellus* C. B. Ad., is a young *T. chlorostomum* Lam.—Krebs 1866, p. 398.]

pulchellus *Adams* **Turbo** (?) Plate 40, fig. 9

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 7.

T. t. minima, albida, maculis rubris quadratis inequalibus, majoribus nigrescentibus, serie decurrente dispositis, ornata; sutura profunda; anf. 5, mediis carinatis, lineis elevatis pluribus decurrentibus—instructis; labro tenui; umbilico nullo. Div. 45°; spirae long. .09 poll.; long. tot. .165 poll.; lat. .1 poll.

Jamaica.

pulcher *Adams* **Trochus** Plate 40, fig. 7

1850, C. to C. no. 5, p. 69.

Shell conical, much elevated: pale claret color, with a dark brown apex, and large ill defined spots of white; with spiral series of minute dark red oblong spots, which are proportioned to the size of the spiral ridges on which they are placed; the ridges of least size are not spotted: solid, with ten or twelve minute spiral ridges, of which one near the

base of the whorls is larger, and three are of an intermediate size, viz., one on each side of the suture and one on the middle of the whorls; on the lower side of the last whorl are sixteen or eighteen other minute revolving ridges, of which every second or third is spotted: apex acute: spire with the outlines nearly rectilinear: whorls seven and one-half, a little concave, acutely prominent in the lower part; last whorl subangular, moderately convex beneath: aperture subquadrate, iridescent within: columella subtruncate: umbilicus wanting. The whorls in this shell have the same form as in *T. jujubinus,* and the general form of the shell is like that of *T. pyramidatus.*

Mean divergence 48°; length of spire .26 inch; total length .38 inch; breadth .27 inch.

Jamaica.

pulchra *Adams* **Rissoa** Plate 33, fig. 8

1850, C. to C. no. 7, p. 114.

Shell subovate, turrited: white, with a pale yellowish brown spiral band on the upper part of the whorls, and a similar band anteriorly: with spiral ridges increasing from two on the upper whorls to four or five on the penult whorl, (of which the upper one is smaller,) and on the last whorl seven, which are crossed, with well developed nodulous intersections, by twenty to twenty-two small transverse ridges; anteriorly with three nodiferous approximate spiral ridges, which are separated from the other seven by a broad groove: apex acute: spire with the outlines moderately curvilinear: whorls ten, quite convex, with a well impressed suture: aperture very effuse: labrum well advanced and excurved, very much thickened.

Mean divergence about 22°; length of spire .155 inch; total length .225 inch; breadth .08 inch.

Jamaica.

[Is *Rissoina cancellata* Philippi.—Desjardins 1949, *Jour. de Conch.* **89,** p. 204.]

puncta *Adams* **Chemnitzia** Type lost.

1850, C. to C. no. 5, p. 72.

Shell much elongated: white: with about twenty-six to

thirty rather prominent transverse ribs, which are not produced below the convexity of the last whorl; with numerous crowded spiral striae in the intercostal spaces, one of which striae, a little above the middle of the whorls, and another along the suture are wide and deep, resembling spiral series of punctures; intercostal spaces depressed anteriorly below the adjacent anterior surface: spire with the outlines rectilinear: whorls ten or eleven, after the loss of the nucleus, scarcely convex, with a distinct suture: aperture ovate-rhombic: labium scarcely thickened: umbilical region scarcely indented.

Mean divergence about 16°; length of spire .185 inch; total length .22 inch; breadth .05 inch.

Jamaica.

[*Chemnitzia puncta* C. B. Ad. is described from two miserable specimens.—Krebs 1866, p. 395.]

puncto-striata *Mighels and Adams* **Bulla**

Plate 32, figs. 17–18

1842, Boston Journal of Natural History **4**, pp. 43–44, pl. 4, fig. 10.

B. testa alba, solida, eleganter striata; striis crebris, inequidistantibus, punctatis; spira occulta; apertura magna.

Shell white, rather solid, ovate, with crowded, inequidistant, distinctly punctate striae; spire concealed; aperture very large, contracted at the upper third by the intrusion of the body whorl; labrum rising above the apex, very sharp and regularly arcuate; labium with a very thin lamina extending to the apex.

Length, .38 inch; breadth, .24 inch.

Habitat. Casco Bay; taken from the stomach of a haddock; in the summer of 1841.

REMARKS. This remarkable and truly beautiful shell, resembles an enlarged specimen of *B. lineolata,* Couth., to which it is allied; but it is easily distinguished by its larger size, by the elevation of the labrum above the apex, and above all, by the punctate striae. Only a single specimen has been found. It is in the cabinet of J. W. Mighels.

puncto-striata *Adams* **Tornatella** Plate 40, figs. 5–6

1840, Boston Journal of Natural History **3**, pp. 323–324, pl. 3, fig. 9.

T. testa parva, elliptica, alba, nitida; anfractibus quinque convexis; sutura valde impressa; anfractu ultimo supra laevi, infra puncto-striato; apertura subovata; umbilico parvo.

Shell small, elliptic, white, glossy, not very thin; whorls five, convex; suture deeply impressed; spire rapidly attenuated, sub-acutely tipped, four-ninths of the length of the shell, smooth; body whorl more than three-fourths of the shell, somewhat shouldered above, smooth on the upper third, below with impressed, parallel, punctate lines, five or six of them distant on the middle, either equally or unequally distant, and six to eight closely approximate on the lower fourth; one line only appears above the aperture, running near and at length into the suture of the body whorl; aperture in the same plane with the axis, the line of its length making with the axis an angle of not more than 10°, five-ninths of the length of the shell, sub-ovate, contract- [324] ed above by the intrusion of the body-whorl, regularly but narrowly rounded below; labrum sharp, prominent, with a short, abrupt curve above, then straight to the middle, arched in the lower half; columella with an obtuse fold; labium moderately reflected below; umbilicus small, partly covered by the reflected labium.

Length, .16 inch; breadth, .095 inch: of a large specimen, length, .18 inch; breadth, .1 inch.

Cabinets of the Bost. Soc. of Nat. Hist.; of Mr. C. F. Shiverick; and my own.

Station and habitat; the same with *Pleurotoma plicata.*

Remarks. In 1838 I found two specimens, after a violent storm, on the shore at New Bedford. Three specimens were found with the preceding species, and several have been obtained by Mr. Shiverick.

purpurascens *Adams* **Chiton** Plate 42, fig. 2

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 9.

C. t. praelonga, purpureo-rubente concentrice striata; margine lato, exilissime squamuloso, caerulescente, alternatim pallidiore. Long. 1.1 poll.; lat. .5 poll.

Jamaica.

purpurascens *Adams* **Columbella** Type lost.

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 2.

C. t. parva, pallide purpurea, striis decurrentibus supra labrum in fauces productis ornata; anf. 5½; apertura elongata; columella supra excavata. Div. 50°; spirae long. .09 poll.; long. tot. .27 poll.; lat. .13 poll.

Jamaica.

[*Columbella purpurascens* C. B. Ad., is placed next to *C. dormitor* Sowb., and is the same species.—Krebs 1866, p. 395.]

purpureo-maculata *Adams* **Psammobia** Plate 45, figs. 1–2

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 10.

P. t. brevi, posterius truncata, albida, maculis paucis purpureis coerulescentibus, interdum obsoletis, ornata; ligamento brevi, crasso.

Jamaica.

[See note under *Psammobia affinis* C. B. Adams.]

pusilla *Adams* **Chemnitzia** Plate 49, fig. 11

1850, C. to C. no. 5, p. 74.

Shell very slender: white: with about twelve rather stout transverse ribs, which are not produced below the convexity of the last whorl; without spiral striae; with the intercostal spaces on the last whorl depressed anteriorly below the adjacent surface of the anterior region, which is smooth; nucleus consisting of about one and one-half smooth whorls, very oblique: spire with rectilinear outlines: whorls ten or eleven besides the nucleus, moderately convex, with a well impressed suture: aperture ovate: labium not perceptibly thickened: umbilical region scarcely indented. This species resembles *C. levis.*

Mean divergence about 8°; length of spire .11 inch; total length .135 inch; breadth .03 inch.

Jamaica.

pygmaea *Adams* **Columbella**

1850, C. to C. no. 4, p. 58.

[Is a synonym of *C. costulata* Adams, which see; non *C. pygmaea* Sowerby.]

pygmaea *Adams* **Pleurotoma** Plate 29, fig. 13

1850, C. to C. no. 4, p. 63.

Shell ovate-fusiform, much elongated: with a broad irregular band of yellowish brown along the upper part of the whorls and below the middle of the last whorl: with small transverse approximate ribs, about fifteen on each whorl, and rather distant spiral elevated lines, the intersections being developed into large nodules: nucleus smooth and opaque white: apex subacate [*sic*]: spire with convex outlines: whorls about six, moderately convex, with a lightly impressed suture: aperture rather narrow: sinus rather large and deep, near the upper end of the labrum: canal very short.

Mean divergence 30°; length of spire .075 inch; total length .13 inch; breadth .055 inch.

Jamaica.

[See note under *P. monilifera* C. B. Adams.]

quadrilineata *Adams* **Pleurotoma** Plate 29, fig. 12

1850, C. to C. no. 4, p. 64.

Shell clavate-pyramidal: white, with one or two fine spiral lines of brown along the suture, and four similar lines just below the periphery of the last whorl, all of which lines are interrupted by the ribs, and with similar but paler lines at the upper part of the whorls and anteriorly: with obtuse moderately elevated transverse ribs, about eleven on each whorl; with many excessively minute finely granose spiral elevated lines, which are more conspicuous where colored as above described, and which are obsolete at the summit of the ribs: apex acute: spire with the outlines nearly rectilinear; whorls seven, subangular above the middle, with a well impressed suture: aperture long-obovate, subacuminate at both extremities: labrum well excurved: sinus shallow: canal short.

Mean divergence about 30°; length of spire .12 inch; total length .21 inch; breadth .08 inch.

Jamaica.

reevii *Adams* **Pleurotoma**

1850, C. to C. no. 4, p. 54.

Pleurotoma violacea Hinds. Proc. Zool. Soc. Lond. March 28, 1843. The name of this species was anticipated by me

in January 1842, for a species which inhabits Maine. Mr. Hinds' species may therefore take the name of *P. Reevii.*

reticulata *Adams* **Chemnitzia** Type lost.

1850, C. to C. no. 5, p. 75.

Shell moderately elongated: white: with about twenty-six to thirty rather strong transverse ribs, which become obsolete on the anterior surface; with very coarse distant spiral raised lines, decussating the ribs: nucleus consisting of a little more than one smooth whorl, very oblique: spire with the outlines a little convex; whorls about seven besides the nucleus, slightly convex, with a well impressed suture: aperture ovate, acute above: labium scarcely thickened: umbilical region not indented.

Mean divergence about 12°; length of spire .09 inch; total length .125 inch; breadth .04 inch.

Jamaica.

reticulata *Mighels and Adams* **Turritella**

Plate 40, figs. 14–15

1842, Boston Journal of Natural History **4**, pp. 50–51, pl. 4, fig. 19.

T. testa turrito-subulata; anfractibus duodecim, convexis, longitudinaliter plicatis, transversim striatis; sutura valde impressa; apertura sub-orbiculari.

Shell turreted, very slender, of a dingy white or ash color; whorls eleven to twelve, convex, distinctly, though somewhat irregularly plicate longitudinally, with from three to five delicate, impressed, revolving striae on the five lower whorls; from and above the fifth whorl the transverse striae gradually diminish in number, until they wholly disappear on the upper two or three whorls. The whole surface of the shell has a reticulated appearance. Suture well impressed; aperture sub-orbicular; labrum thin; operculum horny.

Length .7 inch; breadth .2 inch; divergence 20°.

Cabinets of Bost. Soc. Nat. Hist., Dr. Gould, J. W. Mighels, and C. B. Adams.

[51] *Habitat.* Bay Chaleur, in the Gulf of St. Lawrence; taken from the stomachs of cod fishes (*Morrhua americana* Storer,) by Mr. Foster, fisherman, in the summer of 1841, to whom we are indebted for specimens.

REMARKS. This species is allied to *T. erosa* Couth., but is easily recognized by the longitudinal ribs, and by its more slender form.

rosea *Adams* **Pholas**

1850, C. to C. no. 5, pp. 75–76.

[This name of Adams is a synonym of *P. corticaria* 'Gray' Sowerby 1849, Thesaurus Conchyliorum **2,** p. 495, pl. 108, figs. 94–96. Paratypes MCZ 155633–155634. The lectotype is the specimen figured in the Thesaurus.]

This species was discovered by me in the bark of a log, on the shore of the Bay of Port Royal, near Kingston, Jamaica, in March, 1844. Specimens were distributed with the Mss. name of *P. rosea,* subsequently altered to *P. corticaria.* Some were sent to the British Museum and to Mr. Cuming's collection, where they were seen by Mr. Hanley, who affirmed them to be not distinct from a variety of *P. pusilla* Linn. In deference to his opinion, the description was suppressed from my 'Synopsis' of new species from Jamaica. In part X of Sowb. Thes. Conch. (Dec.?) 1849, a description of this species is published for the first time, with the name of '*P. corticaria* Gray, Mss.,' as being in the British Museum, without indication of habitat. It is said that 'the specimens, having bored in floating mahogany, have taken a reddish color.' This color was derived from the bark of the tree. The shells did not penetrate the wood, and where they were in contact with it, they were distorted, as if unable to penetrate it. Mss. names are not quotable as having the value conferred by authorship, and the name must stand as above. It is unfortunate that the descriptions of several of the new marine species of shells from Jamaica should have been suppressed, in deference to the eminent authority above mentioned, and distributed with erroneous names.

rubella *Adams* **Marginella** Plate 32, fig. 4

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 1.

M. t. tenui, elongata, fasciis tribus rubellis ornata; anf. 4; spira vitrea; labro albo, maculis tribus rubellis ornato, aperturam supra angustante; columella 4-plicata. Diverg. 100°; spirae long. .025 poll.; long. tot. .35 poll.; lat. .17 poll.

Jamaica.

rugulosum *Adams* **Cerithium** Plate 38, fig. 17

1850, C. to C. no. 7, pp. 121–122.

Shell conoid, turrited: white: with one slightly elevated and three much elevated spiral lines, and on each whorl about sixteen to eighteen transverse ridges, the intersections being well developed into nodules, anteriorly with a fourth spiral nodulous slender ridge: apex acute: spire with the outlines nearly rectilinear: whorls about ten, quite convex, with a well impressed suture; last whorl terminating rather abruptly, somewhat concave [122] anteriorly: aperture suborbicular: canal reduced almost to a broad deep notch.

Mean divergence about 13°; length of spire .13 inch; total length .16 inch; breadth .055 inch.

Jamaica.

[See note under *C. vicinum* C. B. Adams.]

scalarella *Adams* **Rissoa** Plate 33, fig. 3

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 6.

R. t. parva, solida, alba; anf. 8, singulatim costis 14 robustis ad extremitatem infra productis—instructis; apertura infra late haud profunde sinuata; labro valde incrassato. Div. 22°; spirae long. .1 poll.; long. tot. .15 poll.; lat. .06 poll.

Jamaica.

[The following additional note appeared in the *Contributions to Conchology* no. 7, p. 114, 1850.]

In the Zeitschrift fur Malac. *R. Scalarella* is referred to the genus *Rissoina,* on account of the presence of a solid calcareous operculum. Some fresh specimens obtained by me near Kingston in 1844, were found to have a horny operculum.

[See note under *R. minor* C. B. Adams.]

[Is *Rissoina catesbyana* d'Orb.—M. Desjardin 1949, *Jour. de Conch.* **89,** p. 198.]

scalariformis *Adams* **Truncatella** Type lost.

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 12.

T. t. solida, elongata, decollata; anf. 4 vel 5 reliquis, singulatim costis 10 robustis et striis decurrentibus exilissimis—ornatis. Div. 20°; long. post decoll. .16 poll.; lat. .08 poll.

Jamaica.

[Is *Truncatella scalaris* Michaud.—Clench and Turner 1948, *Johnsonia* **2,** p. 160.]

scalaroides *Adams* **Rissoa** Plate 33, fig. 6

1850, C. to C. no. 7, p. 113.

Shell long ovate conic: white: with, on each whorl, sixteen or eighteen stout ribs, which are continued to the anterior extremity: apex acute: spire with the outlines moderately curvilinear; whorls seven and one-half, slightly convex, with a well impressed suture: aperture moderately effuse: labrum well advanced and excurved, rather thick.

Mean divergence about 27°; length of spire .13 inch; total length .2 inch; breadth .08 inch.

Variety (?) *minor* is but .15 inch long.

Jamaica.

[See note under *R. minor* C. B. Adams.]

[Is *Rissoina chesneli* Michaud.—Desjardins 1949, *Jour. de Conch.* **89,** p. 196.]

semicostata '*Montagu' Mighels and Adams* **Cingula** Plate 39, figs. 7, 18

1842, Boston Journal of Natural History **4**, p. 49, pl. 4, fig. 23.

C. testa minima, ovata; anfractibus quinque, convexis, infra carinatis, supra plicatis; spira conica; sutura valde impressa; apertura suborbiculari; operculo corneo.

Syn. *Turbo semicostatus* ? Montagu.

Shell very small, ovate-conical, of a ferruginous red color, very thin; whorls for the most part five, convex; with longitudinal ribs on the upper half, and revolving impressed striae on the lower half; last whorl carinate; spire conical, obtuse; suture well impressed; aperture nearly orbicular; labrum thin, sharp; labium smooth; operculum horny.

Length .11 inch; breadth .7 inch; divergence 45°.

Cabinets of Bost. Soc. Nat. Hist., Dr. Gould, Mons. Largillier, J. G. Anthony, and our own.

Habitat. Casco Bay; taken from stomachs of haddock in the summer of 1841.

REMARKS. We offer this with some hesitation, as identical with *T. semi-costatus* Mont. If it should finally prove to be distinct, we would propose to call it *Cingula carinata.*

seminuda *Adams* **Jaminia** Plate 41, figs. 5-6

1839, Boston Journal of Natural History **2**, pp. 280–282, pl. 4, fig. 13.

J. testa parvula, acuto-conica, nitida, albida, sub-translucida; anfractibus septem, convexis, decussatim granulosis; anfractu postremo infra striato; apertura elliptica, basi effusa; columella reflexa, uniplicata.

DESCRIPTION. *Shell,* acute-conic, glossy white, diaphanous; *whorls,* about seven, convex; upper whorls [281] and upper half of the body whorl, rugose longitudinally, with three impressed revolving lines, presenting a decussate or granulous appearance; upon the lower half of the body whorl are four additional impressed revolving lines, one of which runs around at the inferior abrupt termination of the rugae, which are eighteen to twenty; *suture* broad, divided by an indistinct spiral ridge; *apex* acute; *aperture* elliptical, one third the length of the shell; *labrum* not thickened, pectinated by the revolving lines, which are distinctly seen upon the inner side; inferior margin effuse; *columella* with a single suboblique fold, arcuate, reflexed; operculum?

Length, .15 inch; breadth, .07 inch.

Inhabits Dartmouth harbor [Massachusetts].

Cabinets of the Boston Society of Natural History, of William H. Taylor, Esq. of New Bedford, and my own.

Remarks. Of this species I found four specimens only, which are all that I have seen. They were found in Dartmouth, at the village of Ponygansett, four miles southwest from New Bedford. They were about five feet, perpendicular depth, below low water mark, upon single valves of the *Pecten concentricus* Say, in company with the *Nassa lunata* Say, *Columbella avara* Say and the *Nucula margaritacea* Lam. The valves of the *Pecten,* on which they were found, were taken from the bottom by my hands at a venture, when bathing. A dredge would probably reveal more.

This species probably belongs to Brown's genus *Jaminia,* which is nearly allied to his *Pyramis,* but as descriptions of these genera are not accessible, it is with some doubt that I have referred it to *Jaminia.* It undoubtedly belongs to the same genus with the *Actaeon* [282] *trifidus* Totten, (Am. Journ. Sc. XXVI, 368) but this generic name is appropriated to a genus of naked Mollusca.

In size and form this shell resembles the *A. trifidus*, but differs from it in the convex whorls, granulous surface, and revolving lines which are all very distinct and less numerous, while in the *A. trifidus* two or three only are distinct, and the others are nearly obsolete,—in the aperture, which is not angular superiorly, and is more effuse and less rounded inferiorly. It is more nearly allied to *Turbo spiralis* Montague, Test. Brit. p. 323, but differs in the number of volutions and in the presence of the revolving lines around the rugose surface. In the figure the *Turbo spiralis* is broader in the middle of its length, but this species is broader below the middle; the aperture is also shorter.

I take pleasure in affixing the specific name suggested by Dr. Gould.

servile '*C. B. Adams' Krebs* **Cerithium**

1866, Annals Lyceum Natural History New York **8**, p. 394 [nude name].

[*Cerithium servile* C. B. Ad., is not in the Amherst Cabinet; perhaps Adams found it to be syn. with his *C. ambiguum.*—Krebs 1866, p. 394.]

[This species was never described by Adams. Specimens may have been sent to Krebs under this name, a name which was later discarded by Adams.—Clench and Turner.]

solida *Adams* **Cingula** (?) Plate 39, fig. 3

1850, C. to C. no. 5, p. 70.

Shell subconic, well elevated: dark brown, with the lip and apex white: with a few distant subgranular elevated spiral lines, of which the alternate ones are much more minute; anteriorly smooth: apex obtuse: spire with the outlines nearly rectilinear: whorls five, slightly shouldered above, scarcely convex, with a well impressed suture: aperture orbicular, parallel with the axis of the spire: lip reflected on the left side and on the adjacent part of the anterior side: umbilical region moderately indented.

Mean divergence about 32°; length of spire .05 inch; total length .085 inch; breadth .045 inch.

Jamaica.

solida *Adams* **Pleurotoma** Plate 29, fig. 8

1850, C. to C. no. 4, pp. 61–62.

Shell clavate pyramidal: very dark brown or nearly black, with the intercostal spaces pale brown: with a very slight keel on the upper part of the whorls, and a smooth space below it, and somewhat oblique transverse ribs abruptly commencing above the middle of the whorls, and spiral striae in the intercostal spaces; anteriorly with prominent raised revolving lines decussating the transverse ribs: apex subacute: spire with the outlines nearly rectilinear: whorls eight, a little convex, with a moderately impres- [62] sed suture, which is crenulated by the entrance of the ribs from above: aperture rather small: labrum produced along the middle and in dead shells usually broken off: sinus deep, a little below the extremity of the labrum: canal very short. This species is allied to *P. unicolor Sowb., P. rustica Sowb.,* and *P. fuscescens Gray.*

Mean divergence 27°; length of spire .45 inch; total length .68 inch; breadth .28 inch.

Jamaica.

solidula *Adams* **Odostomia** Plate 40, fig. 2

1850, C. to C. no. 7, p. 110.

Shell cylindrical in the lower half, conic above: dingy white: thick and smooth: apex subacute: spire with the outlines moderately curvilinear: whorls six, moderately convex, with a distinct suture; last whorl rather long: aperture ovate, a little effuse and pointed anteriorly: columellar plait stout, obtuse, quite oblique.

Mean divergence about 20°; length .11 inch; breadth .04 inch.

Jamaica.

[See note under *O. canaliculata* C. B. Adams.]

soror *Adams* **Lucina** Plate 45, figs. 11–12

1852, C. to C. no. 12, p. 247.

L. t. suborbiculari; margine superiore antice et postice declivi, inferiore antice subarcuata; cinereo-albida; microscopice creberrime punctulata; striis concentricis exilissimis creberrimis; umbonibus prominentibus; apicibus subobliquis; lunula minutissima; limbo simplici; dentibus lateralibus

obsoletis. Long. 19.6 millim.; alt. 18 millim.; lat. 12.7 millim.

Except in form, it resembles *L. Janeirensis.* It was obtained with *L. pectinella.*

Dredged in 4 or 5 fathoms, in soft mud, in the harbor of Kingston, Jamaica; C.B.A.!

squalidus *Adams* **Chiton** Plate 42, fig. 7

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 8.

C. t. albida, atro-maculata, maculis maximis, rugosa; areis a costa robusta discretis; valvis extremis costis 8 ad 10 instructis; margine membranaceo, setosa. Long. 1.15 poll.; lat. .7 poll.

Jamaica.

squamulosus *Adams* **Chiton** Plate 42, fig. 1

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 8.

C. t. olivacea, linea pallide virente dorsali—ornata; areis lateralibus squamosis inequalibus prostratis—obtectis; areis dorsi mediis sublaevibus, puncto-striatis; margine exile squamuloso, alternatim cinereo-virescente viridique. Long. .7 poll,; lat. .4 poll.

Jamaica.

striosa *Adams* **Rissoa** Plate 34, fig. 8

1850, C. to C. no. 7, p. 116.

Shell ovate conic, somewhat turrited: dingy white or corneous: with, on each whorl, twenty-five to twenty-eight moderately developed transverse folds, which are obsolete on the lower part of the middle whorls and on most of the last whorls; with very numerous crowded deeply impressed spiral striae; with an infrasutural impressed line larger than the striae and constricting the whorls: apex acute: spire with the outlines moderately curvilinear: whorls nine, rather convex, with a moderately impressed suture: aperture somewhat effuse, large: labrum well advanced, much excurved, moderately thickened.

Mean divergence about 26°; length of spire .135 inch; total length .2 inch; breadth .08 inch.

Jamaica.

[Is a *Rissoina.*—M. Desjardin 1949, *Jour. de Conch.* **89,** p. 203.]

subangulata *Adams* **Rissoa** Plate 34, fig. 9

1850, C. to C. no. 7, pp. 112–113.

Shell long ovate conic: white: with on each whorl, eleven or twelve rather acute but stout ribs, which spread to their bases with concave sides, and which on the last whorl are produced to the anterior extremity; sometimes with very lightly im- [113] pressed microscopic spiral striae: apex acute: spire with slightly convex outlines, often with a curved axis: whorls seven and one-half, quite convex, with a well impressed suture: aperture moderately effuse and rather large: labrum well produced and excurved, rather thick. The name of this species was originally suggested by specimens, in which the axis is more than usually distorted. Since it has been used in other collections, and in my printed catalogue of North American shells, I have not deemed it expedient to substitute a more appropriate name.

Mean divergence about 35°; length of spire .13 inch; total length .21 inch; breadth .095 inch.

Jamaica.

subcostulata *Adams* **Columbella** Plate 41, fig. 1

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 2.

C. t. *C. pygmaeae Sowb.* affini, exiliore, costis minus elevatis, apertura latiore; fusco irregulariter maculata et reticulata. Div. ib.; spirae long. .165 poll.; long. tot. .285 poll.; lat. .125 poll.

Jamaica.

[*Columbella catenata* Sowb., and *C. subcostata* [*sic*] C. B. Ad. Specimens with these two names are positively the same species.—Krebs 1866, p. 395.]

subglobosa *Adams* **Lucina**

1847, Proc. Boston Soc. Nat. Hist. **2,** p. 228 [nude name].

[Is a synonym of *Lucina janeirensis* Reeve, according to C. B. Adams 1852, *Contributions to Conchology,* no. 12, p. 245.

substriata *Adams* **Chemnitzia** Type lost.

1850, C. to C. no. 5, pp. 73–74.

Shell moderately elongated: white, with a slight tinge of wax color next above the suture: with about twenty-two to twenty-four transverse rather stout ribs; in the intercostal spaces and anteriorly with very numerous crowded excessively minute spiral striae, which are scarcely perceptible under a common magnifier; on the middle of the whorls is a spiral series of shallow pits in the intercostal spaces; on the last whorl, with the anterior extremities of the intercostal spaces moderately depressed below the surface of the anterior region: spire with rectilinear outlines: whorls about eight, planulate, with a distinct suture: aperture rhombic-ovate: labium scarcely thickened: umbilical region scarcely indented.

[74] Mean divergence about 12°; length of spire .09 inch; total length .115 inch; breadth .04 inch.

Jamaica.

[See note under *C. multicostata* C. B. Adams.]

subulata *Adams* **Chemnitzia** Type lost.

1850, C. to C. no. 5, p. 73.

Shell much elongated, subulate: white, or pale brownish white with two spiral bands of pale wax color, and a third of the same color anteriorly: with about twenty-eight to thirty rather prominent slender transverse ribs, which are not quite obsolete below the convexity of the last whorl; in the intercostal spaces and anteriorly with numerous excessively fine crowded spiral striae, of which one next below the suture is larger: nucleus consisting of about one and one-half whorls, moderately oblique: spire with a slightly curved axis, with the outlines scarcely convex: whorls ten after the loss of the nucleus, rather convex, with a well impressed suture: aperture ovate, acute above: labium slightly thickened: umbilical region slightly indented.

Mean divergence about 11°; length of spire .13 inch; total length .17 inch; breadth .045. inch.

Jamaica.

[See note under *C. exilis* C. B. Adams.]

succinea *Adams* **Truncatella** Plate 40, fig. 11

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 12.

T. t. magna, succinea-rubente, decollata; anf. 5 vel 5½ perditis; anf. reliquis 3½ vel 4, costis crebris (ultimi obsoletis)—ornatis; apertura albida; operculo convexo, calcareo, corneo-marginato. Div. 22°; spirae long. post decoll. .2 poll.; long. tot. .31 poll.; lat. .13 poll.

Jamaica.

sulphurea *Adams* **Helix** Type lost.

1849, C. to C. no. 3, p. 33.

Shell sub-globose, conic above, and a little tapering below; yellow, nearly transparent; smooth and shining; spire with the outlines a little convex, well elevated, conic; apex very small and acute; whorls four, a little convex, with a well impressed finely margined suture; last whorl very long; aperture sub-subovate; labrum very thin and sharp; columella much produced, nearly straight; umbilicus none.

Mean divergence 90°; greatest breadth .175 inch; least breadth .13 inch; height .16 inch.

Perhaps this is a young shell, but probably not of any described species.

1850, C. to C. no. 6, p. 98.

On page 33 we described *Helix sulphurea* as 'perhaps a young shell.' This opinion was founded on its papyraceous appearance. Mr. Chitty, from whom the original specimens were received, has recently furnished a series, which shows that this shell, with all the generic characters of *Helix,* is the last embryonic stage of the West Indian variety of *Dolium perdix!*

[Is *Tonna maculosa* Dillwyn.—Turner 1948, *Johnsonia* **2**, p. 169.]

swiftiana *Adams* **Corbula** Plate 48, figs. 1–2

1852, C. to. C. no. 12, pp. 236–237.

C. t. subovoidea, solidissima, inequivalvi, vix inequilaterali, postice acute rostrata; margine ventrali excurvata: albida: rugis irregularibus et striis concentricis; junioribus exilissime radiatim striatis: apicibus parvis, haud involutis: um-

bonibus perconvexis, antice subangulatis, postice acute angulatis: dentibus robustis. Long. 10′′′.4; alt. 5′′′.9; lat. 5′′′.9.

Shell subovoid, very solid, inequivalve, slightly inequilateral, acutely rostrated posteriorly, anteriorly well rounded and glo- [237] bose, with the dorsal margins nearly straight and the ventral margin well excurved: whitish: with moderately developed concentric irregular ridges and striae; with the larger valve sculptured more regularly and deeply than the other; with very minute radiating striae in the young: beaks small, not involute: umbones very convex, indistinctly angulated anteriorly, with a sharp but not very prominent angle posteriorly: teeth robust. It is the analogue of *C. nasuta,* which inhabits the Pacific coast of tropical America.

Length .41 inch; height .235 inch; breadth .235 inch.

Station.—Sand, in 3 or 4 fathoms water; C.B.A.!

Habitat.—St. Thoms; T. Bland! in sched. in Mus. Amh. [erst]. In the east part of the harbor of Kingston, Jamaica; C.B.A.! About 250 specimens were collected.

tenera *Adams* **Arca** Plate 43, figs. 1–2

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 9.

A. t. albida, subtenui, elliptica, decussata, media compressa, umbonibus planulatis, approximatis; costulis radiantibus crenulatis; striis concentricis pilearibus; dentibus paucis; hiatu minimo. Long. .8 poll.; alt. .5 poll.; lat. .4 poll.

Jamaica.

tenera *Adams* **Patella** Types lost.

1845, Proc. Boston Soc. Nat. Hist. **2,** p. 8.

P. t. tenui, fragili, diaphana, albida, fusco-radiata, (radiis plerumque 8) maculata, vel reticulata, exile decussata, anterius et posterius convexa; margine acuto, exile pectinato. Long. .72 poll.; lat. .53 poll.; alt. .15 poll.; alt. exemp. long. .74 poll.; lat. .55 poll.; alt. .21 poll.; dec. ant.: dec. post. : : 5 : 8.

Jamaica.

tenuicostatus *Mighels and Adams* **Pecten** Plate 44, fig. 9

1842, Boston Journal of Natural History **4,** pp. 41–42, pl. 4, fig. 7.

P. testa parva, tenui, sub-equivalvi; valva superiore pler-

umque rubro-fusca, tenuicostata, costis majoribus 25 usque ad 30, totidem minoribus; auribus costulatis; valva inferiore pallide rubro-fusca; extus et intus laevi.

Shell small, sub-orbicular, higher than long, thin, equilateral, sub-equivalve, upper valve a little more convex; with twenty-five to thirty slender ribs and smaller ones intermediate; for the most part reddish-brown; inferior valve smooth, paler than the upper; ears slightly unequal, those of the upper valve delicately ribbed, of the other smooth; color internally the same as externally; inner surface of the lower valve smooth, that of the upper grooved.

Length, .5 inch; height, .56 inch; width, .14 inch.

Cabinets of Mons. Largillier, J. W. Mighels, and C. B. Adams.

Habitat. Casco Bay, taken from stomachs of haddock in the summer of 1840. We have found but four specimens.

[42] REMARKS. This is unquestionably a very rare species. It does not appear to be very nearly allied to any of the other species found on our coast. Further research will be necessary to determine whether or not the specimens already found are mature. Like most of the Pectens, this shell varies very much in coloring.

terebellum *Adams* **Cerithium** Plate 37, figs. 5–7

1847, Catalogue of the Genera and Species of Recent Shells in the collection of C. B. Adams, p. 19.

Syn. *C. terebrale* Ad.; this name having been pre-occupied by Lamarck for a fossil shell, I propose as a substitute, *C. terebellum.*

terebrale *Adams* **Cerithium** Plate 37, figs. 5–7

1840, Boston Journal of Natural History **3**, pp. 320–321, pl. 3, fig. 7.

C. testa parva, elongata, fusca, saepe albo-cincta; anfractibus duodecim, planulatis, cum quatuor elevatis lineis; spira elevata, conica; sutura subimpressa; apertura ovata, parva.

Syn. *C. Emersonii*, var. nov.

Shell small, elongated, brown, frequently with a white band, with rather slight incremental striae; whorls eleven or twelve, flattened; spire seven-eighths of the length of the shell, five-sixths of its bulk, its opposite sides containing an

angle of about 20°, conic, with four elevated, obtuse, revolving lines on each whorl, of which the first and second, and third and fourth are equidistant; the space between the second and third is obviously less on the upper whorls, but approaches to an equality with the other spaces, in the growth of the shell; the first three ridges are equal, and the fourth small and depressed, [321] so as to lie almost wholly beneath the first of the succeeding whorl; the suture consequently appears on the upper side of the first ridge, and is moderately impressed; spaces between the ridges crossed by more or less elevated irregular lines, or coarse striae of growth; last whorl on the upper half, sculptured as the spiral whorls, with a fifth smaller revolving line on the lower part; aperture ovate, one-eighth of the length of the shell, the line of its length making an angle of about 25° with the axis of the shell; labrum thin; canal rather more than a third as long as the aperture, turning to the left.

Length, .46 inch; width, .13 inch.

Cabinet of Bost. Soc. Nat. Hist., of Middlebury College, of Mr. C. F. Shiverick, and my own.

Station. In soft mud, below low water mark.

Habitat. New Bedford and the vicinity.

Remarks. This species was at first regarded as a variety of *C. Emersonii,* but the subsequent examination of numerous specimens has satisfied me that the distinctive characters are constant. It differs from that shell in having a large elevated ridge in place of the carina on the upper part of the whorls, and in having three equal ridges in the upper whorls of the spire. The entire want of granulations distinguishes it from the common type of that species. It is distinguished from the Murex tubercularis of Montagu by the same character. The latter is said to have but three revolving ridges, and is also of much less size than our shell. A number of dead specimens have been obtained by dredging, and Mr. Shiverick has found a few in a fresh condition.

[Name changed to *Cerithium terebellum* C. B. Adams, *non C. terebrale* Lamarck.]

tervaricosa *Adams* **Rissoa** Plate 34, fig. 3

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 6.

R. t. tenui, diaphana, albida, interdum pallide fusco exilissime tessellata; sutura profunda; anf. 9, convexis, singulatim ter-varicosis, varicibus candidissimus, in seriebus tribus continuis, et striis exilissimis distantibus decurrentibus—ornatis. Div. 23°; spirae long. .17 poll.; long. tot. .225 poll.; lat. .08 poll.

Jamaica.

[*Rissoa tervaricosa* C. B. Ad., is syn. with *R. melanura* C. B. Ad., and *Eulima incerta* d'Orb.—Krebs 1866, p. 397.]

tessellata *Adams* **Phasianella*** Plate 36, fig. 12

1850, C. to C. no. 4, pp. 67–68.

Shell ovate conic: with fine rather distant parallel spiral lines of brown, which descend more rapidly than the whorls; with transverse irregular flames of olive brown or red, which have white shadows on the left side, and which form with [68] the spiral lines a rather irregularly tessellated arrangement of colors: surface very glossy: apex subacute: spire with slightly convex outlines: whorls four, moderately convex, with a well impressed suture; last whorl abruptly rounded or subangular: aperture ovate-elliptical: with a small umbilicus. A variety from some other West Indian island is of a nearly olive brown, but without any difference in the spiral lines of dark brown, which do not appear to be subject to the variability of coloring which is so common in this genus.

Mean divergence about 68°; length of spire .11 inch; total length .2 inch; breadth .15 inch.

Jamaica.

Thetis *Adams*

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 9.

G. t. *Astarte* affini, sed dente laterali remota anteriore in

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*This name of Adams is both a synonym and homonym of *Phasianella tessellata* 'Beck' Potiez and Michaud as well as a similar name by Anton. References are as follows:

Phasianella tessellata 'Beck' Potiez and Michaud 1838, Galerie des Mollusques, p. 312, pl. 29, figs. 7–8 (Martinique [Lesser Antilles]).

Phasianella tessellata Anton 1839, Verzeichniss der Conchylien, p. 61 (South America).

utraque valva—instructa; pallii impressione vix vel haud sinuata.

tincta *Adams* **Vitrinella** Plate 35, figs. 3, 6

1850, Monograph of Vitrinella, p. 8.

V. t. subdiscoidea: alba, anfractum ultimum rubro tincta, striis plurimis et carinis duobus parvis cincta: apice obtusa; spira convexa; anfractibus tribus, valde accrescentibus, sutura impressa: umbilico profundo.

Globose discoidal: white, translucent, with strains of reddish purple on the last whorl: with numerous spiral striae, and two small distant revolving carinae on either side of the periphery of the last whorl: apex obtuse: spire convex, but little elevated: whorls three, rapidly increasing from the first, with a well impressed suture; last whorl somewhat concave beneath the lower carina: aperture scarcely modified by the last whorl: umbilicus deep, not very wide. Mean divergence about 135°; length of spire .015 inch; total length .035 inch; greatest breadth .055 inch; least breadth .045 inch.

Port Royal, Jamaica.

[This species is represented by two specimens. The type (fig. 6) is badly broken, but has the surface somewhat better preserved, showing pale brownish vinaceous radial clouds on the upper surface of the last whorl, which is minutely striate spirally. The base also has very minute spiral striation. The shape is depressed subglobose, with low convex spire. Whorls about $2\frac{3}{4}$ to 3, joined by a distinctly impressed suture. The periphery is flattened and obtusely biangular. The base has a median angle.

In the second specimen (fig. 3) the "strains of reddish purple" mentioned by Professor Adams are not visible on the white surface, which is dull and beachworn, showing spiral striation only where protected, in the umbilical concavity. The peristome is thin, and in this shell irregularly broken. The columella is reflexed, with a median point at the termination of a strong but narrow spiral cord which contracts the umbilicus. The parietal callus is very thin. Diameter 1.1 mm., height 0.7 mm.

The reflection of the columella is somewhat exaggerated by reason of the broken outer lip, and consequent rolling of the

shell towards the left, in order to show the full width of the aperture.

The most remarkable feature of the type specimen of this species is the color, which suggests *Omphalius* of the *fasciatus* group, which is also somewhat similar in structure of columella and umbilicus. I have not been able to compare young *Omphalius* nearly as small as *V. tincta,* but the smallest seen do not have the carinate base or such minute striation as *V. tincta,* and the apical whorl seems larger, though it is not perfect in those compared. Moreover, *V. tincta* does not appear to be pearly within. The color variegation is elsewhere unknown in Vitrinellidae, I believe.—Pilsbry 1946, p. 4.]

trilineata *Adams* **Pleurotoma** Plate 29, fig. 15
Plate 49, fig. 5

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 3.

P. t. minima, alba, lineis tribus pallide fuscis fasciata; anf. $6\frac{1}{2}$, subangulatis, lineis pluribus elevatis decurrentibus, et costulis longitudinalibus—instructis; labro crasso; sinu profundo; canali brevissimo. Div. 25°; spirae long. .1 poll.; long. .185 poll.; lat. .075 poll.

Jamaica.

truncata *Mighels and Adams* **Thracia** Plate 43, figs. 5–7

1842, Boston Journal of Natural History **4**, p. 38, pl. 4, fig. 1.

T. testa parva, solida, per-inequilaterali, postice truncata, et striata: callo nymphali producto.

Shell small, white, rather solid, abruptly truncate posteriorly, very inequilateral; surface with three regions; the anterior region separated from the posterior by an umbonial angle, which extends from the beak to the lower extremity, marked with numerous minute incremental striae; posterior region with the incremental striae distinct and much crowded; areolar region narrow, with regular striae of growth; epidermis thin, of a pale straw-color; beaks small, that of the right side moderately excavated for the reception of the left; posterior dorsal margin straight, descending abruptly to an angle with the anterior, which is also straight, making an angle with the inferior, which is moderately curved: anterior margin regularly rounded; anterior dorsal margin slightly curved; ligament rather large and prominent; interi-

or of a clear white; nymphaeal callosity not spoon-shaped, produced; pallial impression deeper than wide.

Average length, .75 inch; height, .5 inch; width, .29 inch.

Cabinets of Bost. Soc. Nat. Hist., J. W. Mighels, and C. B. Adams.

Habitat. Casco Bay, Me., obtained in 1840, from stomachs of haddock.

REMARKS. Although this shell is small, its solidity, quite unusual in the genus, forbids the supposition that it is immature. It is remarkably distinct from other species in the disparity of the anterior and posterior sides, whose length are as eight to three. It must be regarded as exceedingly rare, three or four years exploration having developed only four or five specimens.

variabile *Adams* **Cerithium** Plate 37, fig. 2

1845, Proc. Boston Soc. Nat. Hist. **2**, p. 5.

C. t. parva, solida, nigra, irregulariter albo-maculata; sutura profunda; anf. 9, convexis, striatis, striis creberrimis decurrentibus; spirae anf. plicis 4 angustis decurrentibus, et plicis longitudinalibus, intersectionibus nodiferis—instructis; labro intus incrassato et crenato; labio supra uniplicato; canali brevi. Div. 30°; spirae long. .34 poll.; long. tot. .51 poll.; lat. .2 poll.

Jamaica.

[*Cerithium variabile* C. B. Ad. We take this to be syn. with *C. minimum* Gmel. and *C. zonale* Brug., perhaps also with *C. septemstriatum* Say, *C. ferrugineum* Say, *C. megasoma* C. B. Ad., and *C. nigrescens* Menke.—Krebs 1866, p. 394.]

varicosa *Mighels and Adams* **Margarita** Plate 36, fig. 8

1842, Boston Journal of Natural History **4**, p. 46, pl. 4, fig. 14.

M. testa parva, tenui, conica; anfractibus quatuor, convexis; longitudinaliter costulatis, transverse striatis; sutura sub-canaliculata; umbilico magno, profundo.

Shell small, thin, low, conical, of a dingy white or drab color; whorls four, convex, covered with numerous longitudinal, oblique ribs, intersected by a great number of transverse, revolving striae, which are most conspicuous on the lower part and base of the lower whorl. The striae on the

upper part of the whorls can only be seen with a magnifier. Suture distinct, sub-canaliculate; umbilicus rather large and deep, bounded by two rather rugged varices, intersected by the ribs which are continued to the verge of the umbilicus; aperture circular; labrum simple, sharp; within perlaceous.

Height, .25 inch; diameter of base equal to the height; divergence, 90 degrees.

Habitat. Bay Chaleur; taken from the stomach of a codfish, (*Morrhua americana* Storer) in the summer of 1841, by our fisherman, Mr. Foster.

REMARKS. Only a single specimen of the above dimensions has been obtained, and one other, much smaller and somewhat worn. It is easily distinguished from all its congeners by the longitudinal, oblique ribs, and the two varices at the base. It is in the cabinet of J. W. Mighels.

versicolor *Adams* **Cerithium** Plate 37, fig. 1

1850, C. to C. no. 7, p. 119.

Shell ovate conic, turrited: usually mottled irregularly with reddish black and white, white prevailing on the varices and on the upper whorls, and the black on the lower whorls and especially on the granules; sometimes mostly white; sometimes mostly black: with numerous transverse ridges, which are prominent on the upper whorls; with, on most of the whorls, three spiral ridges, the intersections being developed into very prominent subacute nodules; and a fourth smaller spiral ridge in the suture of the last whorl; with intermediate spiral striae; anteriorly with four additional smaller less strongly nodulous spiral ridges and intermediary striae; with rather less than two irregular varices to each whorl: apex very acute: spire with the outlines slightly curvilinear: whorls ten or eleven, a little convex, with a well impressed suture: aperture subovate, rather acuminate at both extremities: labrum rather sharp, very much thickened both externally and internally a little behind the edge, deeply striated within: labium with a small callus on the upper part: canal very short, rather wide, much deflected to the left.

Mean divergence about 26°; length of spire .42 inch; total length .57 inch; breadth .2 inch.

Jamaica.

vicina *Adams* **Mangelia** Plate 31, fig. 13

1850, C. to C. no. 4, pp. 66–67.

Shell fusiform, moderately elongated: dull brownish red, white along the upper part of the whorls and anteriorly: [67] with strong transverse ribs, smooth on the summits, about ten on each whorl; with unequal spiral microscopic striae: apex acute: spire with rather convex outlines: whorls about six, moderately convex, with a distinct suture: aperture rather narrow: labrum well thickened by the last rib: sinus rather large: canal very short. Similar to *M. brevis.*

Mean divergence about 40°; length of spire .1 inch; total length .17 inch; breadth .08 inch.

Jamaica.

[*Mangelia vicina* C. B. Ad., very likely is *Pleurotoma badia* Rv.—Krebs 1866, p. 396.]

vicinum *Adams* **Cerithium** Plate 37, fig. 10

1850, C. to C. no. 7, p. 122.

Shell similar to *C. rugulosum,* but in place of the spiral lines are spiral ridges, and in place of the transverse ridges are slender transverse elevated lines, the proportion of size being reversed; whorls about eight or nine; the canal is a little more developed.

Mean divergence about 11°; length of spire .09 inch; total length .12 inch; breadth .04 inch.

Jamaica.

[*Cerithium vicinum* C. B. Ad., and *C. rugulosum* C. B. Ad., we take to be synonymes.—Krebs 1866, p. 394.]

violacea *Mighels and Adams* **Pleurotoma** Plate 31, figs. 4–6

1842, Boston Journal of Natural History **4**, p. 51, pl. 4, fig. 21.

P. testa atro-purpurea, longitudinaliter sub-plicata, transverse striate; anfractibus sex, ultimo supra carinato, plicis in medio evanescentibus, alteris medio carinatis; spira acuta; apertura angustata; cauda brevi.

Shell small, of a blackish purple color, ovate, with a pale brown epidermis irregularly sub-plicate, with numerous faint revolving striae decussating by the incremental striae; whorls six; whorls of the spire carinate in the middle; last

whorl shouldered by a continuation of the same carina, with the plications terminating on its convexity; spire acute, conic; suture distinct; aperture narrow, rather less than half the length of the shell; labrum simple, sharp, regularly curved, with the sinus at the extremity; canal short, wide.

Length .3 inch; breadth .15 inch; divergence 40°.

Cabinets of Bost. Soc. Nat. Hist., G. B. Sowerby, J. W. Mighels, and C. B. Adams.

Habitat. Casco Bay; found without the animal, at low-water mark, in the summer of 1840, and subsequently in the stomachs of *haddock.*

REMARKS. This species is remotely allied to *P. decussata* Couth.; our shell, however, is always longer, aperture narrower, and the sculpture less regular and distinct; but it is especially characterized by having the spiral carina far below the suture.

vitrea *Adams* **Rissoa** Plate 33, fig. 1

1850, C. to C. no. 7, p. 115.

Shell ovate conic, turrited: with a scarcely perceptible bluish tinge, opaque white at the suture and in the thickening around the aperture; in the rest *transparent as glass,* and clearly exhibiting the internal structure: highly polished, with some scarcely perceptible microscopic striae of growth, and a fine impressed spiral line very near and next below the suture: apex very acute: spire with the outlines moderately curvilinear: whorls nearly ten, slightly convex, with a distinct but moderately impressed suture: aperture very effuse and angular anteriorly: labrum very much excurved and advanced, moderately thickened.

Mean divergence 26°; length of spire .19 inch; total length .29 inch; breadth .105 inch.

Jamaica.

[Is a *Rissoina*—M. Desjardin 1949, *Jour. de Conch.* **89,** p. 207.]

Vitrinella *Adams*

1850, Monograph of Vitrinella, pp. 3–4.

Testa turbiniformi, minima, vitrea; apertura maxima, orbiculari, subtus valde indentata, vel umbilicata.

Shell turbiniform, vitreous, minute, with a large orbicular aperture, either umbilicated or with the umbilical region deeply and widely indented.

The form of the aperture would place these shells in *Turbo* or *Margarita.* The want of an umbilicus excludes three of the species from the latter. The operculum is unknown; but as it is extremely improbable that thin vitreous almost transparent shells should have solid calcareous opercula, we may assume it to be horny, which will exclude the species from Turbo, regarding this genus as best characterized by the operculum. The most widely umbilicated species approximates in form to *Skenea,* and might be mistaken for a depressed umbilicated species of Helix. In texture, the nearest approach among the kindred genera is in *Margarita arctica* Leach. From all the Turbinidae known to us, they are however well distinguished by their vitreous texture and rapid enlargement of the whorls, which last character produces a large aperture. The variation [47] in respect of an umbilicus is parallel with the similar variation in *Turbo.* They are not the young of any larger species, for the first one or one and one-half whorls are distinguished from the following whorls by nuclear peculiarities, as want of sculpture, &c. We are acquainted with the young of all the larger species which inhabit the same localities, and none of them resemble these shells.

Most of the specimens were obtained from a pint of sand, which contained 110 species of shells, and which was taken from a surface of three or four square yards of sand beach in a little cove near Port Royal, Jamaica, on the outside of the peninsula. A few were found on the inside of the peninsula. Of *V. megastoma* and *V. interrupta* we obtained several specimens: of the other species,—one to four of each. Probably all the species are rare.

[Genotype, *Vitrinella helicoides* Adams. Subsequent designation, K. J. Bush 1897, (Trans. Connecticut Academy **10,** p. 106) .]

The following is a list of the various species described by C. B. Adams. They are grouped under the genera to which they were originally assigned. Subsequent generic changes for a few of the species are indicated in the main body of this report.

Amphidesma: jayanum.

Arca: tenera.

Buccinum: candidissimum; concinnum; obesum; pulchellum.

Bulla: occulta; puncto-striata.

Cardita: ovata.

Cemoria: princeps.

Cerithium: albovittatum; algicola; ambiguum; bicolor; dealbatum; decoratum; emersonii; exiguum; exile; flavum; fusiforme; gemmulosum; gibberulum; greenii; intermedium; iota; latum; megasoma; melanura; mirable; modestum; mutabile; nanum; nigrocinctum; pulchellum; rugulosum; servile; terebellum; terebrale; variabile; versicolor; vicinum.

Chemnitzia: babylonia; exilis; flavocincta; latior; levis; multicostata; obeliscus; puncta; pusilla; reticulata; substriata; subulata.

Chiton: costatus; erythronotus; mendicarius; multicostatus; papillosus; purpurascens; squalidus; squamulosus.

Cingula: arenaria; carinata; concinna; conica; latior; semicostata; solida.

Columbella: costulata; decipiens; fenestrata; ovuloides; purpurascens; pygmaea; subcostulata.

Conus: armillatus.

Corbula: barrattiana; blandiana; chittyana; dietziana; fulva; kjoeriana; knoxiana; krebsiana; newtoniana; swiftiana.

Erato: cypraeoides.

Eulima: affinis; arcuata; conica; fulvo-cincta; gracilis; jamaicensis.

Fasciolaria: ligata.

Fissurella: elongata.

Fusus: cancellatus; muricoides; nitens.

Gouldia.

Helix: sulphurea.

Jaminia: producta; seminuda.

Lima: pellucida.

Litiopa: effusa; obesa.

Littorina: interrupta; jamaicensis.

Lucina: americana; granulosa; imbricatula; ornata; pectinata; pectinella; pilula; pulchella; soror; subglobosa.

Mactra: bilineata.

Mangelia: alba; biconica; brevis; crassicostata; densestriata; lanceolata; ligata; muricoides; vicina.

Margarita: varicosa.

Marginella: abbreviata; alba; albida; fluctuata; gracilis; nivea; rubella.

Mitra: albicostata; albo-cincta; exigua; monilifera.

Monodonta: angulata; livido-maculata; maculo-striata.

Murex: intermedius; pauperculus.

Narica: anomala.

Natica: gouldii; jamaicensis; nigrescens; proxima.

Nerita: praecognita.

Neritina: All species, originally described by C. B. Adams in this genus will be included under land and freshwater genera of Jamaica.

Nucula: antiqua; cascöensis; delphinodonta.

Odostomia: canaliculata; gemmulosa; ovuloides; solidula.

Patella: albicosta; tenera.

Pecten: tenuicostatus.

Pedipes: globulosus; ovalis.

Perna: bicolor.

Phasianella: affinis; brevis; concinna; concolor; tesselata.

Pholas: rosea.

Plectrotrema: inaequalis.

Pleurotoma: albella; albida; albo-cincta; albo-maculata; albo-vittata; augustae; candidissima; decorata; diminuta; dubia; elatior; flavocincta; fusca; fuscocincta; fusco-lineata; fusiformis; jayana; maculata; minor; monilifera; multilineata; nigrescens; nodata; plicata; plicosa; pygmaea; quadrilineata; reevii; solida; trilineata; violacea.

Psammobia: affinis; biradiata; cerina; purpureo-maculata.

Purpura: aberrans; nodulosa.

Pyramis: fusca.

Rissoa: aberrans; affinis; albida; crassicosta; dubiosa; eulimoides; laevigata; laevissima; melanura; minor; multicostata; princeps; pulchra; scalarella; scalaroides; striosa; subangulata; tervaricosa; vitrea.

Scalaria: ligata; modesta.

Tellina: decussatula; nitens.

Terebra: jamaicensis.

Thetis: cerina; parva.

Thracia: inequalis; truncata.

Torinia: canalifera.

Tornatella: puncto-striata.

Triton: parvus; pulchellus.

Trochus: occidentalis; pulcher.

Truncatella: cummingii; gouldii; modesta; scalariformis; succinea.

Turbo: pulchellus.

Turritella: costulata; reticulata.

Vitrinella: helicoidea; hyalina; interrupta; megastoma; tincta.

* * * *

Addenda

After the first portion of this paper had been printed, the following paper by Max Desjardin was received. This paper was based in part upon photographs made of the C.B.Adams types. References have been made to this work throughout our report under the various species except for *Rissoa affinis* which was printed at that time.

Desjardin, Max, 1949, Les Rissoina de l'Ile de Cuba. *Journal de Conchyliologie* **89,** pp. 193–208, pls. 9–10.

Under *Rissoa affinis,* p. 251 add:

Is *Rissoina striatocostata* d'Orbigny—M. Desjardin 1949, *Jour. de Conch.* **89,** p. 201.

Plate 29

Fig. 1. *Pleurotoma flavocincta* Adams. Holotype MCZ 155917 (10x).
Fig. 2. " *albella* Adams. Holotype MCZ 186006 (10x).
Fig. 3. " *maculata* Adams. Lectotype MCZ 177376 (10x).
Fig. 4. " *decorata* Adams. Lectotype MCZ 177371 (4x).
Fig. 5. " *albocincta* Adams. Lectotype MCZ 177356 (6x).
Fig. 6. " *albomaculata* Adams. Holotype MCZ 186024 (3x).
Fig. 7. " *elatior* Adams. Holotype MCZ 155923 (10x).
Fig. 8. " *solida* Adams. Lectotype MCZ 186005 (3x).
Fig. 9. " *fusca* Adams. Holotype MCZ 177044 (10x).
Fig. 10. " *multilineata* Adams. Holotype MCZ 177030 (10x).
Fig. 11. " *nigrescens* Adams. Lectotype MCZ 177354 (6x).
Fig. 12. " *quadrilineata* Adams. Lectotype MCZ 186007 (10x).
Fig. 13. " *pygmaea* Adams. Holotype MCZ 155918 (10x).
Fig. 14. " *nodata* Adams. Holotype MCZ 186004 (6x).
Fig. 15. " *trilineata* Adams. Lectotype MCZ 177361 (10x). (See also Plate 49, fig. 5.)

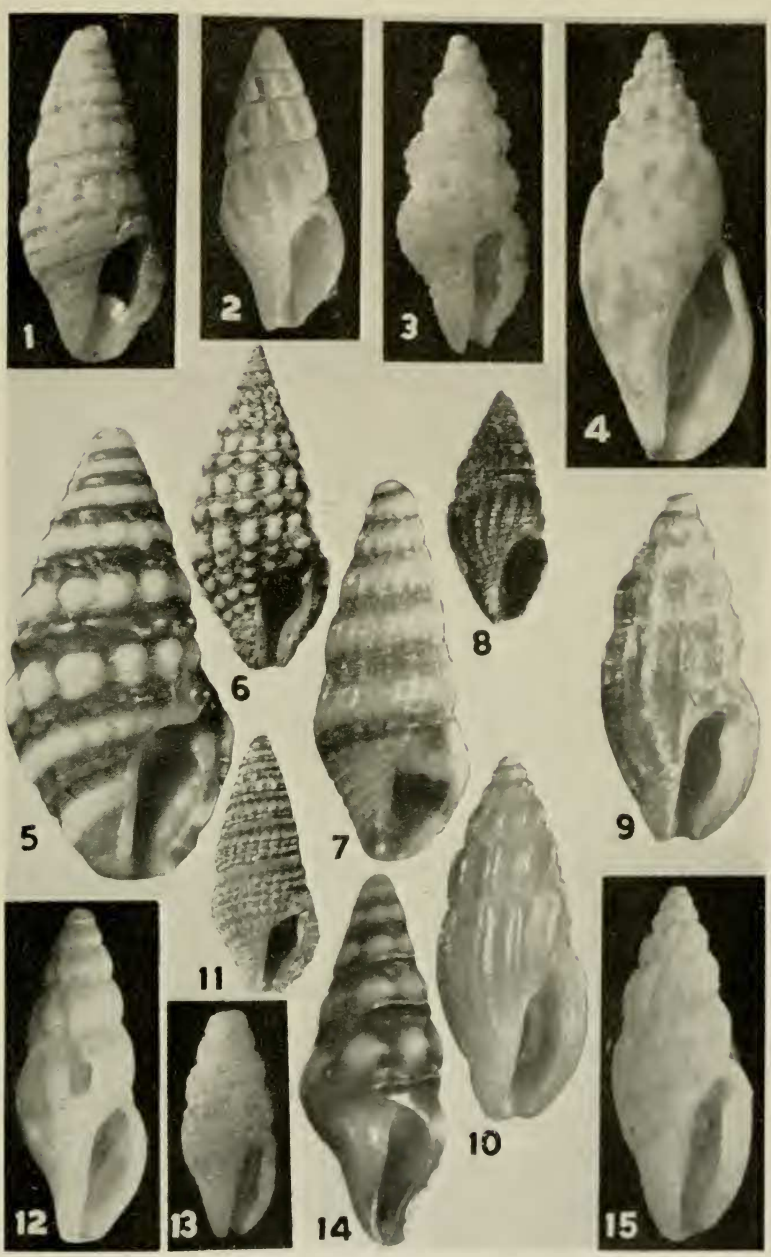

Plate 29

Plate 30

Fig. 1. *Pleurotoma augustae* Adams. Holotype MCZ 177375 (4x).
Fig. 2. " *albida* Adams. Holotype MCZ 177360 (10x).
Fig. 3. " *albovittata* Adams. Holotype MCZ 177358 (10x).
Fig. 4. " *jayana* Adams. Holotype MCZ 156157 (4x).
Fig. 5. " *candidissima* Adams. Holotype MCZ 186002 (10½x).
Fig. 6. " *fuscocincta* Adams. Holotype MCZ 155958 (10x).
Fig. 7–8. " *fusiformis* Adams. Holotype MCZ 177379 (Fig. 7, 8x; Fig. 8, about 10x).

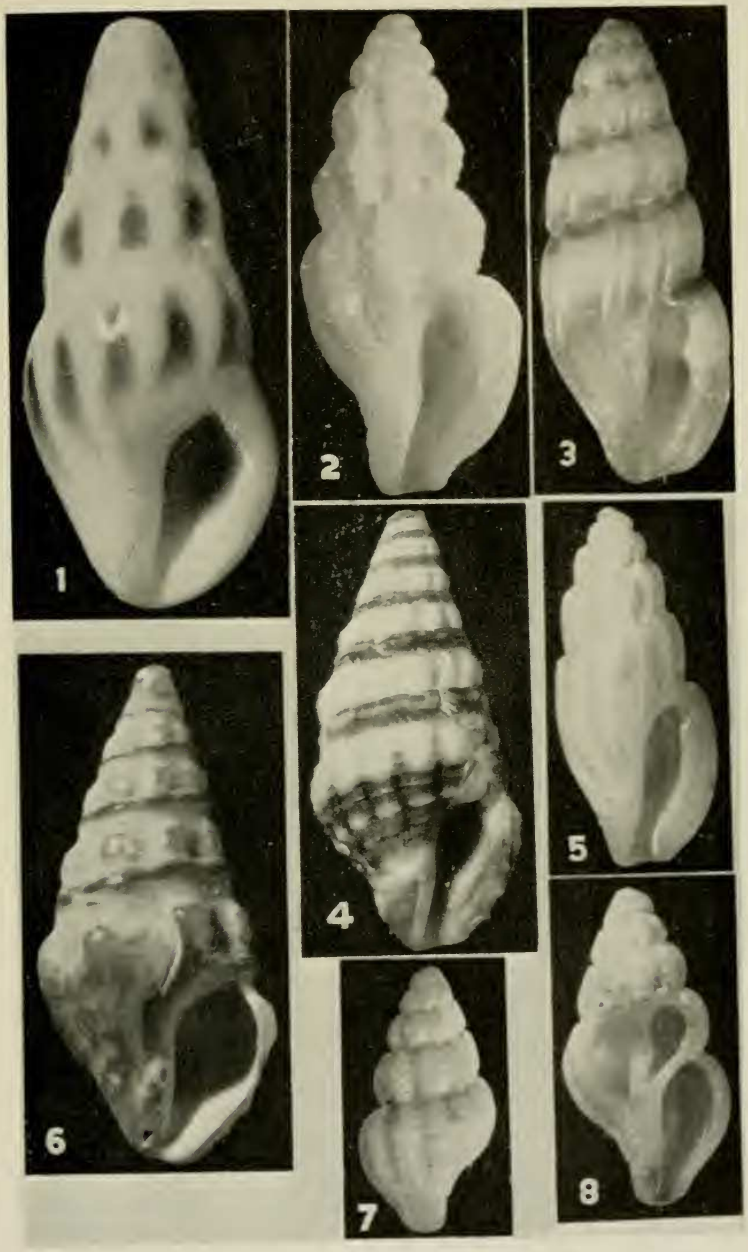

Plate 30

Plate 31

Fig. 1. *Pleurotoma plicata* Adams (=*P. plicosa* Adams). Lectotype MCZ 155921 (about 6x). (See also Plate 32, fig. 5–6.)
Fig. 2. *Pleurotoma dubia* Adams. Lectotype MCZ 177031 (about 6x).
Fig. 3. " *diminuta* Adams. Lectotype MCZ 186148 (about 6x).
Fig. 4. " *violacea* Mighels and Adams. Lectotype MCZ 165594 (about 4x).
Fig. 5–6. *Pleurotoma violacea* Mighels and Adams (enlarged from original figures).
Fig. 7. *Pleurotoma minor* Adams. Lectotype MCZ 186122 (about 10x).
Fig. 8. *Mangelia densestriata* Adams. Holotype MCZ 177027 (10x).
Fig. 9. " *lanceolata* Adams. Lectotype MCZ 177380 (10x).
Fig. 10. *Conus armillatus* Adams. Holotype MCZ 154005 (2x).
Fig. 11. *Mangelia muricoides* Adams. Holotype MCZ 177378 (10x).
Fig. 12. " *crassicostata* Adams. Holotype MCZ 155933 (10x).
Fig. 13. " *vicina* Adams. Lectotype MCZ 177374 (10x).
Fig. 14. " *brevis* Adams. Lectotype MCZ 155934 (10x).

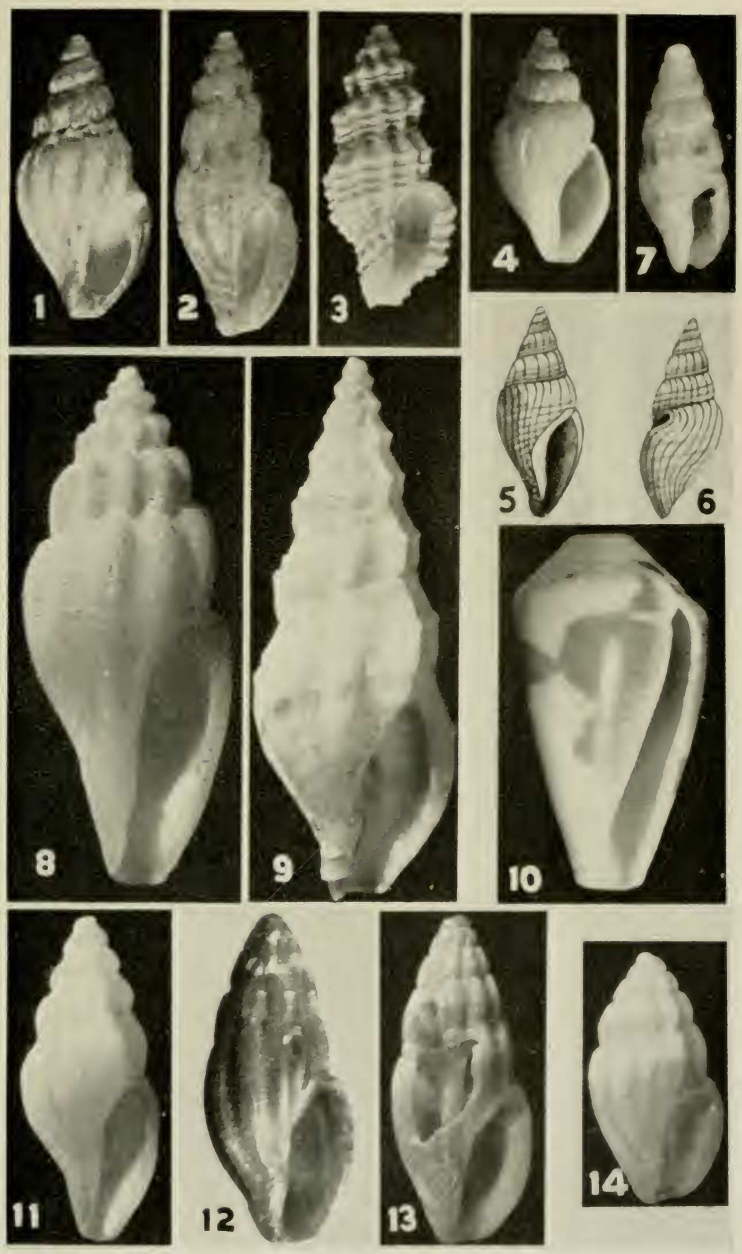

Plate 31

Plate 32

Fig. 1. *Mangelia biconica alba* Adams. Lectotype MCZ 186008 (10x).
Fig. 2. " *biconica* Adams. Lectotype MCZ 177377 (10x).
Fig. 3. *Marginella fluctuata* Adams. Holotype MCZ 186047 (10x).
Fig. 4. " *rubella* Adams. Lectotype MCZ 186143 (3x).
Fig. 5–6. *Pleurotoma plicata* Adams (enlarged from original figures). (See also Plate 31, fig. 1)
Fig. 7. *Marginella alba* Adams. Lectotype MCZ 186032 (10x).
Fig. 8. " *abbreviata* Adams. Holotype MCZ 186003 (6x).
Fig. 9. *Purpura aberrans* Adams. Holotype MCZ 177956 (3x).
Fig. 10. " *nodulosa* Adams. Lectotype MCZ 177045 ($2\frac{2}{3}$x).
Fig. 11. *Buccinum obesum* Adams. Lectotype MCZ 156016 (7x).
Fig. 12. " *pulchellum* Adams. Holotype MCZ 186110 (about 10x).
Fig. 13. *Marginella nivea* Adams. Lectotype MCZ 186053 (4x).
Fig. 14. " *gracilis* Adams. Lectotype MCZ 186119 (about 10x).
Fig. 15. *Bulla occulta* Mighels and Adams. Lectotype MCZ 156452 (enlarged from original figures). *
Fig. 16. *Buccinum concinnum* Adams. Lectotype MCZ 186112 (4x).
Fig. 17. *Bulla punctostriata* Mighels and Adams. Neoholotype MCZ 177003 (3x).
Fig. 18. *Bulla punctostriata* Mighels and Adams (enlarged from original figures).

* This was given in error as fig. 13 in the text.

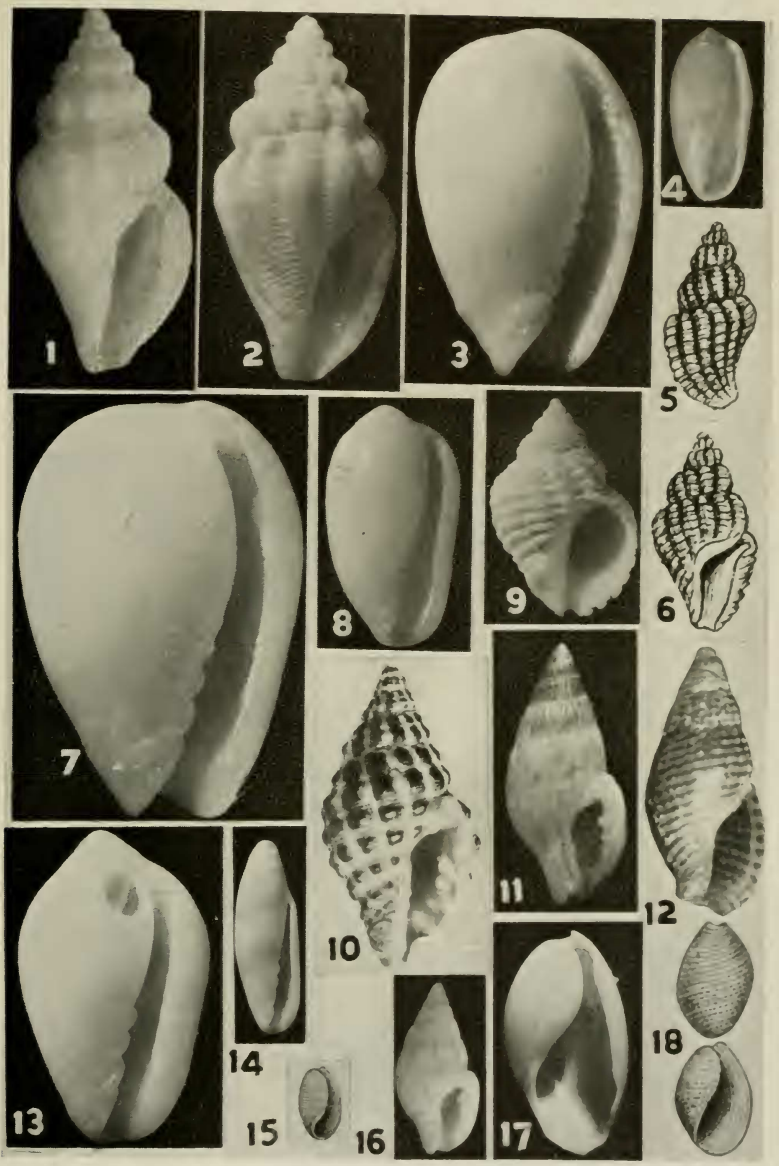

Plate 32

Plate 33

Fig. 1. *Rissoa vitrea* Adams. Holotype MCZ 155418 (15x).
Fig. 2. " (?) *melanura* Adams. Holotype MCZ 156424 (10x).
Fig. 3. " *scalarella* Adams. Lectotype MCZ 177102 (17x).
Fig. 4. " *multicostata* Adams. Lectotype MCZ 177098 (10x).
Fig. 5. " *dubiosa* Adams. Lectotype MCZ 177097 (10x).
Fig. 6. " *scalaroides* Adams. Lectotype MCZ 177103 (10x).
Fig. 7. " *laevissima* Adams. Lectotype MCZ 177094 (10x).
Fig. 8. " *pulchra* Adams. Holotype MCZ 156423 (10x).
Fig. 9. " *eulimoides* Adams. Holotype MCZ 156416 (10x).
Fig. 10. " *aberrans* Adams. Holotype MCZ 156426 (10x).
Fig. 11. *Erato* (?) *cypraeoides* Adams. Lectotype MCZ 186065 (4x).

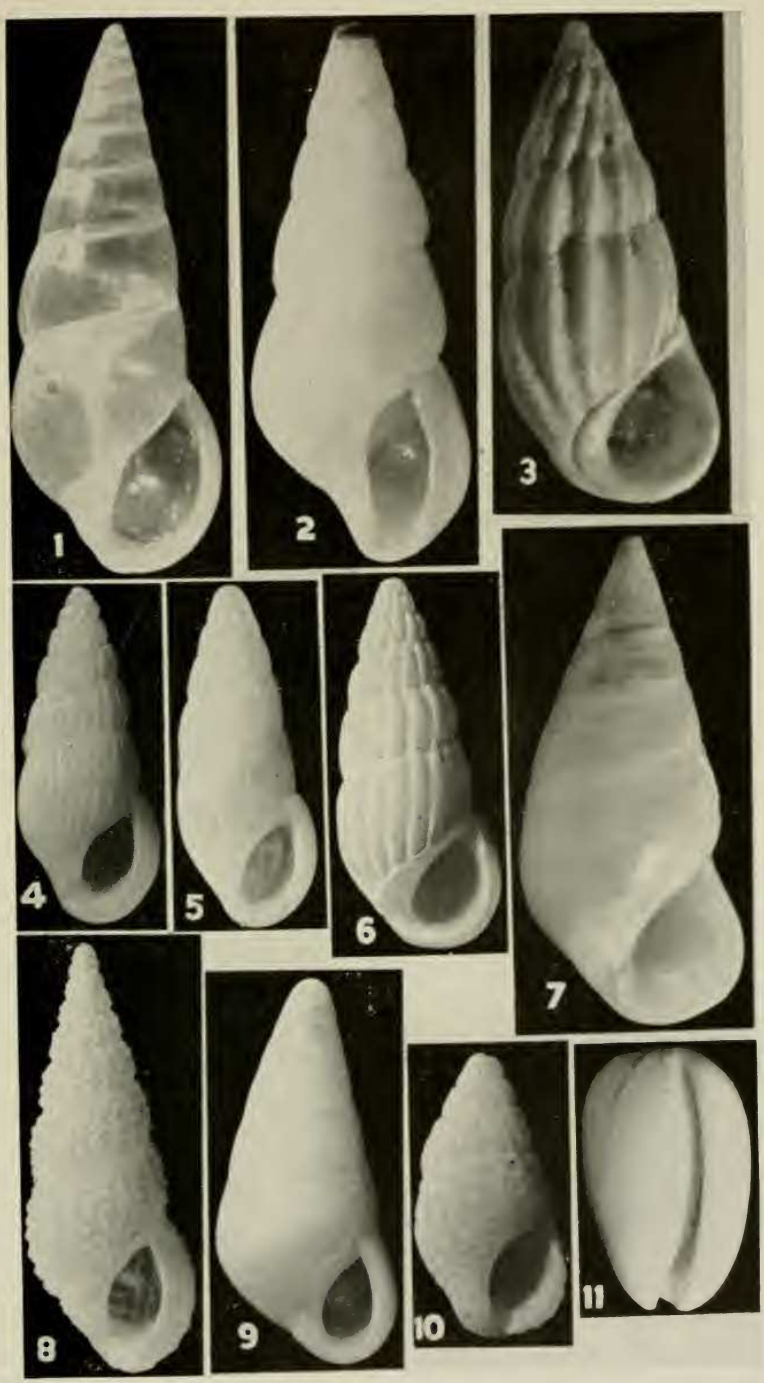

Plate 33

Plate 34

Fig. 1. *Rissoa princeps* Adams. Lectotype MCZ 177093 (10x).
Fig. 2. " *albida* Adams. Lectotype MCZ 177099 (10x).
Fig. 3. " *tervaricosa* Adams. Lectotype MCZ 177096 (10x).
Fig. 4. " *scalaroides minor* Adams. Holotype MCZ 156425 (about 8½x).
Fig. 5. " *affinis* Adams. Holotype MCZ 156411 (10x).
Fig. 6. " *crassicosta* Adams. Lectotype MCZ 186174 (about 4x).
Fig. 7. " *laevigata* Adams. Holotype MCZ 156414 (10x).
Fig. 8. " *striosa* Adams. Lectotype MCZ 156431 (10x).
Fig. 9. " *subangulata* Adams. Lectotype MCZ 177095 (10x).

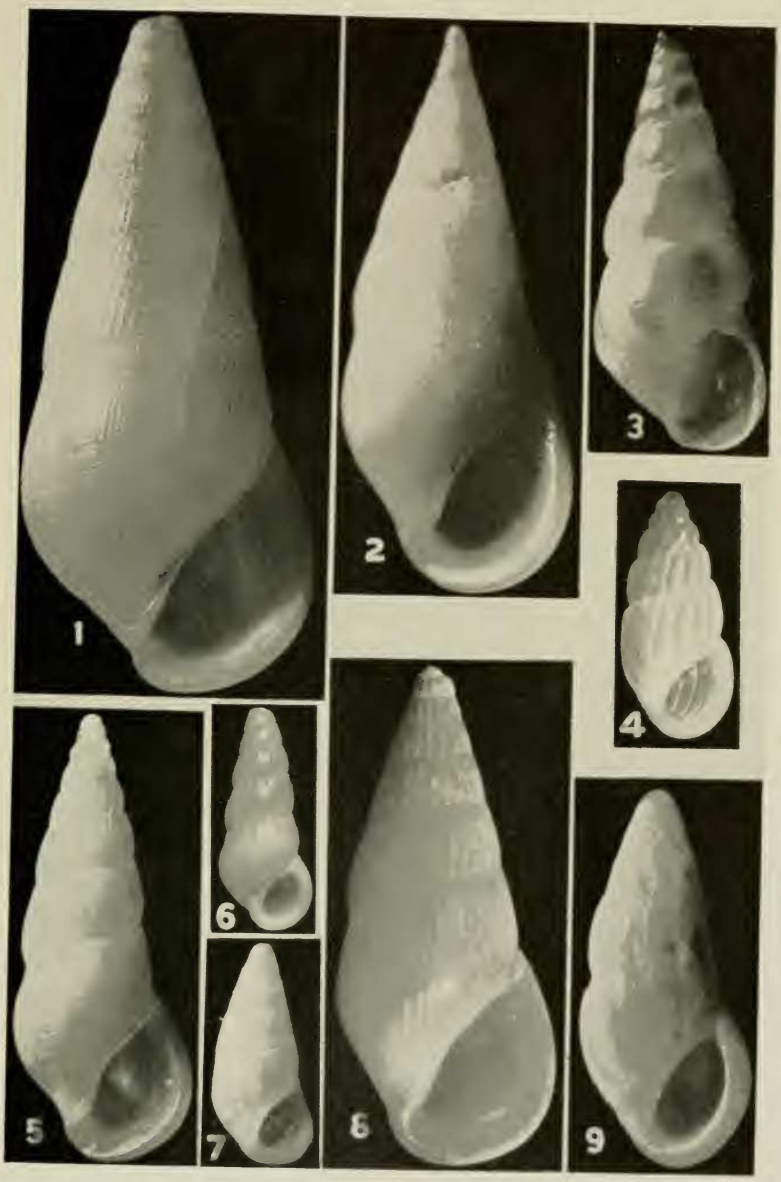

Plate 34

Plate 35

Fig. 1. *Vitrinella helicoidea* Adams. Lectotype MCZ 156271 (17½x).
Fig. 2. " *megastoma* Adams. Lectotype MCZ 156269 (21x).
Fig. 3, 6. " *tincta* Adams. Lectotype MCZ 156257 (25½x).
Fig. 4, 5. " *interrupta* Adams. Holotype MCZ 156270 (25x).

We are indebted to Dr. H. A. Pilsbry for the loan of this plate. It appeared originally in Notulae Naturae, no. 162, January 18, 1946.

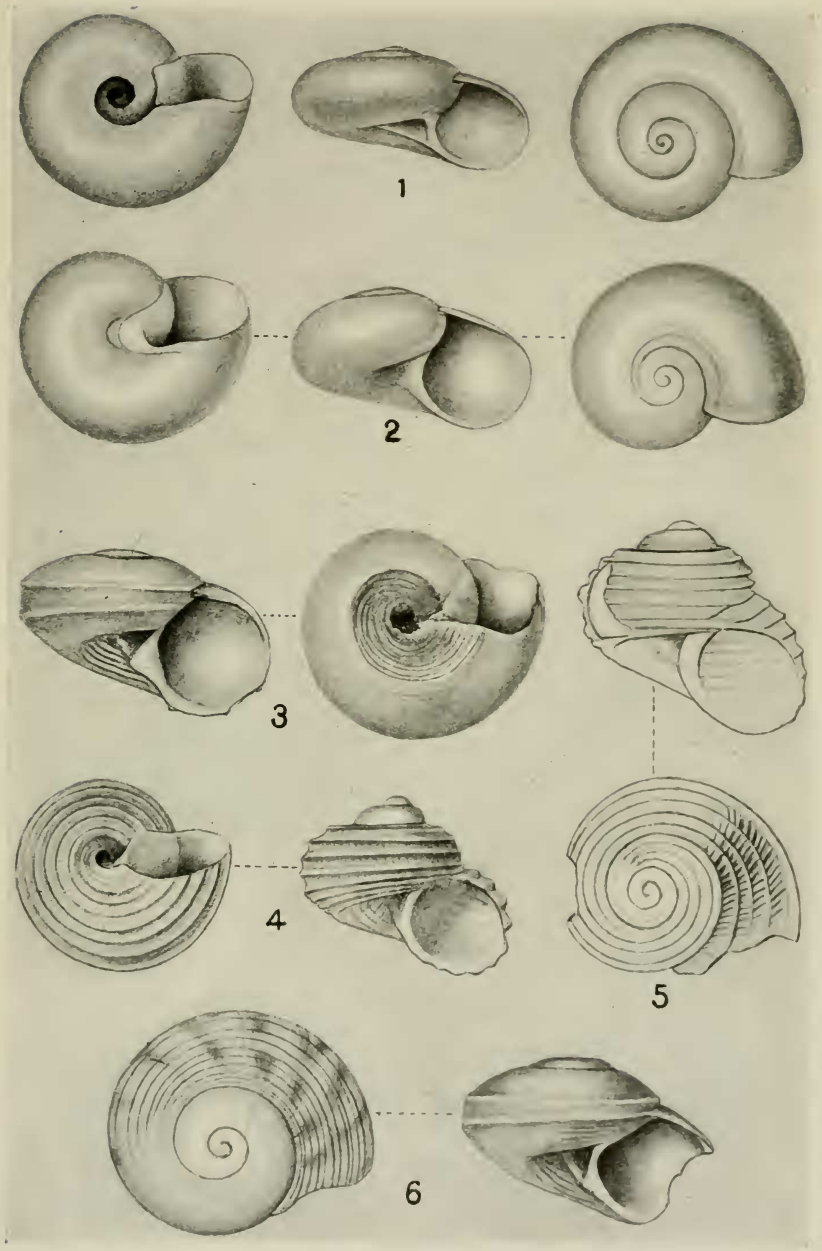

Plate 35

Plate 36

Fig. 1. *Patella albicosta* Adams. Lectotype MCZ 186033 (about 3x).
Fig. 2. " *albicosta* Adams. Paratype MCZ 156462 (about 3x).
Fig. 3. *Phasianella concolor* Adams. Lectotype MCZ 186022 (15x).
Fig. 4. " *concinna* Adams. Lectotype USNM 54766 (4x).
Fig. 5. *Eulima jamaicensis* Adams. Lectotype MCZ 156355 (about 8x).
Fig. 6. *Phasianella affinis* Adams. Lectotype MCZ 186020 (8x).
Fig. 7. *Eulima conica* Adams. Lectotype MCZ 186183 (12x).
Fig. 8. *Margarita varicosa* Mighels and Adams. Types lost. (Enlarged from original drawing.)
Fig. 9. *Mitra monilifera* Adams. Holotype MCZ 186093 (2½x).
Fig. 10. " *albocincta* Adams. Holotype MCZ 177080 (3x).
Fig. 11. " *albicostata* Adams. Holotype MCZ 177083 (3x).
Fig. 12. *Phasianella tesselata* Adams. Lectotype MCZ 186067 (10x).

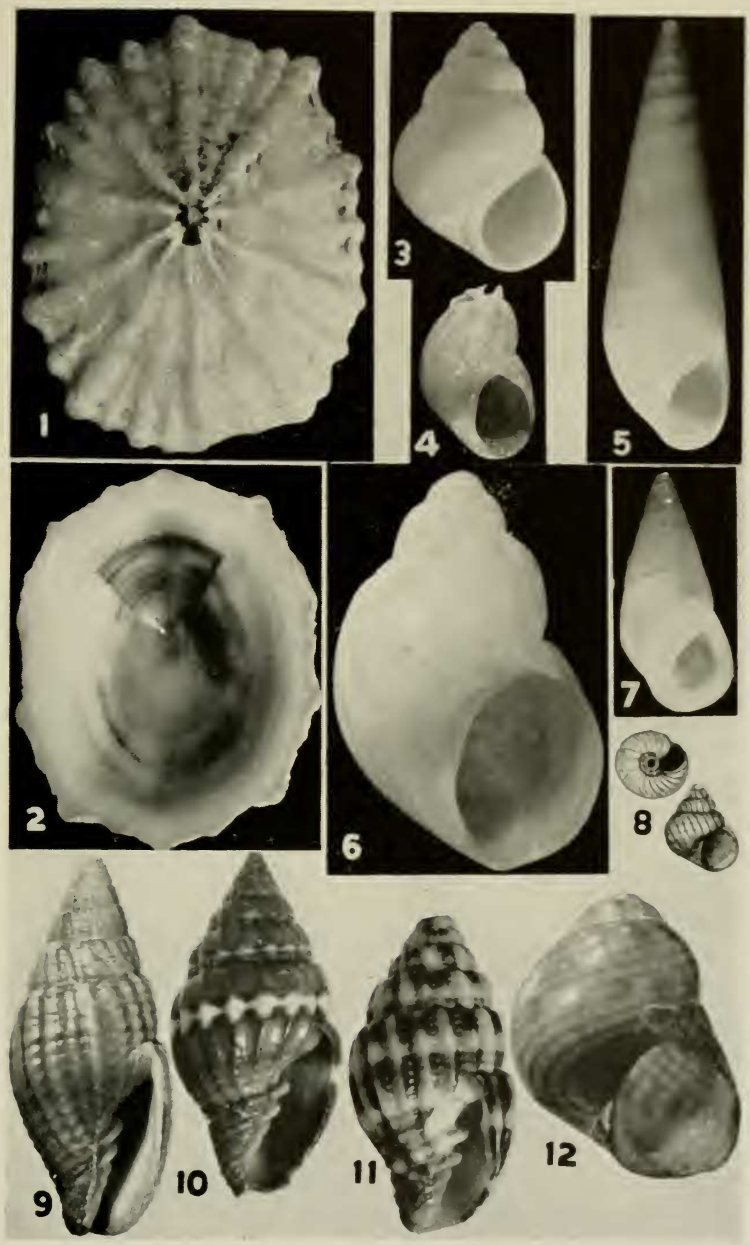

Plate 36

Plate 37

Fig. 1. *Cerithium versicolor* Adams. Lectotype MCZ 186054 (4x).
Fig. 2. " *variabile* Adams. Lectotype MCZ 186056 (4x).
Fig. 3. " *gibberulum* Adams. Lectotype MCZ 186078 (6x).
Fig. 4. " *algicola* Adams. Lectotype MCZ 186026 (3x).
Fig. 5. " *terebrale* Adams. Lectotype MCZ 156200 (2$\frac{1}{4}$x).
Fig. 6, 7. " " " (enlarged from original figures).
Fig. 8. " *megasoma* Adams. Lectotype MCZ 186096 (2$\frac{1}{2}$x).
Fig. 9. " *mutabile* Adams. Lectotype MCZ 186094 (3x).
Fig. 10. " *vicinum* Adams. Lectotype MCZ 186155 (about 3x).
Fig. 11. " *flavum* Adams. Holotype MCZ 186114 (about 10x).
Fig. 12. " *emersonii* Adams. Lectotype MCZ 156201 (3$\frac{1}{2}$x).
Fig. 13, 14. " " " (enlarged from original figures).
Fig. 15. " *bicolor* Adams. Lectotype MCZ 186057 (6x).
Fig. 16. " *iota* Adams. Lectotype MCZ 186115 (about 10x).
Fig. 17. " *greenii* Adams (enlarged from original figure).
Fig. 18. " *greenii* Adams. Lectotype MCZ 156202 (about 12x).

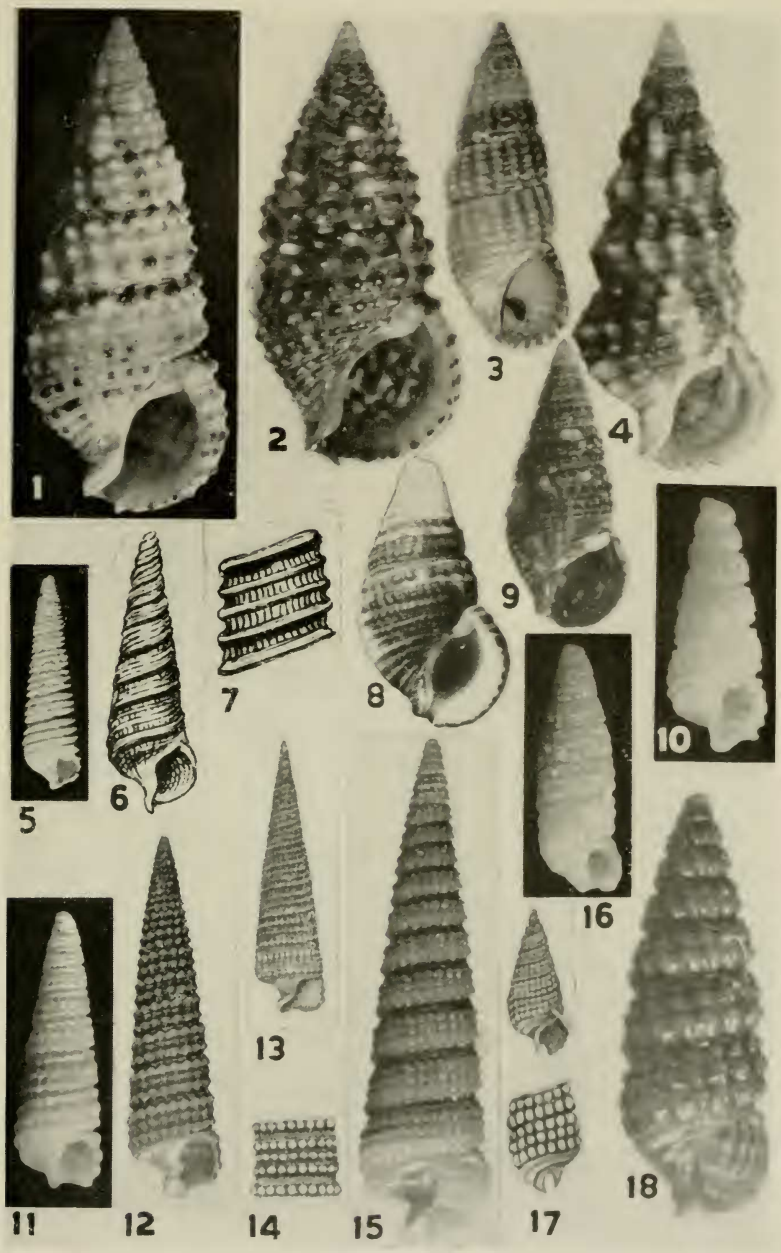

Plate 37

Plate 38

Fig. 1. *Cerithium mirabile* Adams. Lectotype MCZ 154353 (12x).
Fig. 2. " *decoratum* Adams. Lectotype MCZ 186178 (16x).
Fig. 3. " *dealbatum* Adams. Holotype MCZ 186179 (7x).
Fig. 4. " *fusiforme* Adams. Holotype MCZ 186127 (about 10x).
Fig. 5. " *latum* Adams. Holotype MCZ 186134 (about 10x).
Fig. 6. " *albovittatum* Adams. Holotype MCZ 156142 (10x).
Fig. 7. " *ambiguum* Adams. Lectotype MCZ 186025 (3x).
Fig. 8. " *exile* Adams. Holotype MCZ 177150 (10x).
Fig. 9. " *intermedium* Adams. Lectotype MCZ 186161 (7½x).
Fig. 10. " *melanura* Adams. Lectotype MCZ 186159 (7x).
Fig. 11. " *nigrocinctum* Adams. Lectotype MCZ 186157 (10x).
Fig. 12. " *intermedium* Adams. Heautotype MCZ 186162 (7½x).
Fig. 13. " *gemmulosum* Adams. Holotype MCZ 186075 (10x).
Fig. 14. " *nigrocinctum* Adams (enlarged from original figure).
Fig. 15. *Cemoria princeps* Mighels and Adams (enlarged from original figure).
Fig. 16. *Fasciolaria ligata* Mighels and Adams (enlarged from original figure).
Fig. 17. *Cerithium rugulosum* Adams. Lectotype MCZ 186153 (about 14x).
Fig. 18. *Littorina lineata* var. *interrupta* 'C. B. Adams' Philippi. Paratype MCZ 186123 (about 2½x).
Fig. 19. *Littorina jamaicensis* Adams. Lectotype MCZ 186133 (2½x).
Fig. 20. *Pyramis fusca* C. B. Adams (enlarged from original figure).
Fig. 21. " " " " Lectotype MCZ 156006 (10x).
Fig. 22. *Terebra jamaicensis* C. B. Adams. Neoholotype MCZ 186151 (about 2½x).

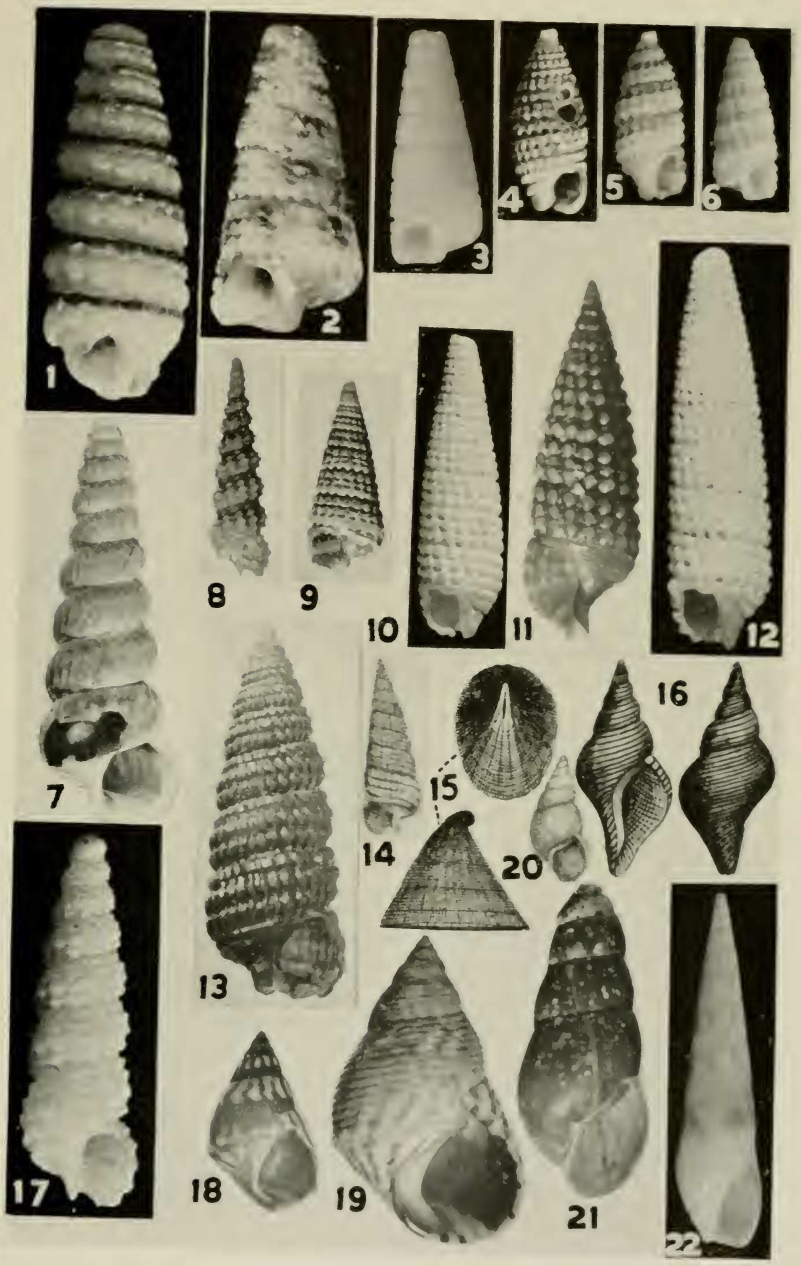

Plate 38

Plate 39

Fig. 1. Copy of Adams' symbol used in several descriptions.
Fig. 2. *Cingula latior* Mighels and Adams. Type lost (enlarged from original figure).
Fig. 3. *Cingula* (?) *solida* Adams. Holotype MCZ 186083 (15x).
Fig. 4. " " *concinna* Adams. Lectotype MCZ 186084 (15x).
Fig. 5. " " *conica* Adams. Holotype MCZ 186082 (15x).
Fig. 6. " *arenaria* Adams. Type lost (enlarged from original figure).
Fig. 7. " *semicostata* 'Montagu' Mighels and Adams. Type lost (enlarged from original figure).
Fig. 8. *Cerithium modestum* Adams. Lectotype MCZ 186180 (13x).
Fig. 9. *Fusus muricoides* Adams. Holotype MCZ 186092 (2½x).
Fig. 10. " *cancellatus* Mighels and Adams. Type lost (enlarged from original figure).
Fig. 11. *Monodonta lividomaculata* Adams. Lectotype MCZ 186061 (2x).
Fig. 12. " *angulata* Adams. Lectotype MCZ 149300 (2½x).
Fig. 13. " *maculostriata* Adams. Lectotype MCZ 186070 (2x).
Fig. 14. *Narica* (?) *anomala* Adams. Lectotype MCZ 186034 (10x).
Fig. 15. *Murex intermedius* Adams. Lectotype MCZ 156123 (about 2½x).
Fig. 16. " *pauperculus* Adams. Lectotype MCZ 156124 (about 2½x).
Fig. 17. *Fusus nitens* Adams. Holotype MCZ 186191 (about 2½x).
Fig. 18. *Cingula carinata* Mighels and Adams. Lectotype MCZ 185255 (16x).

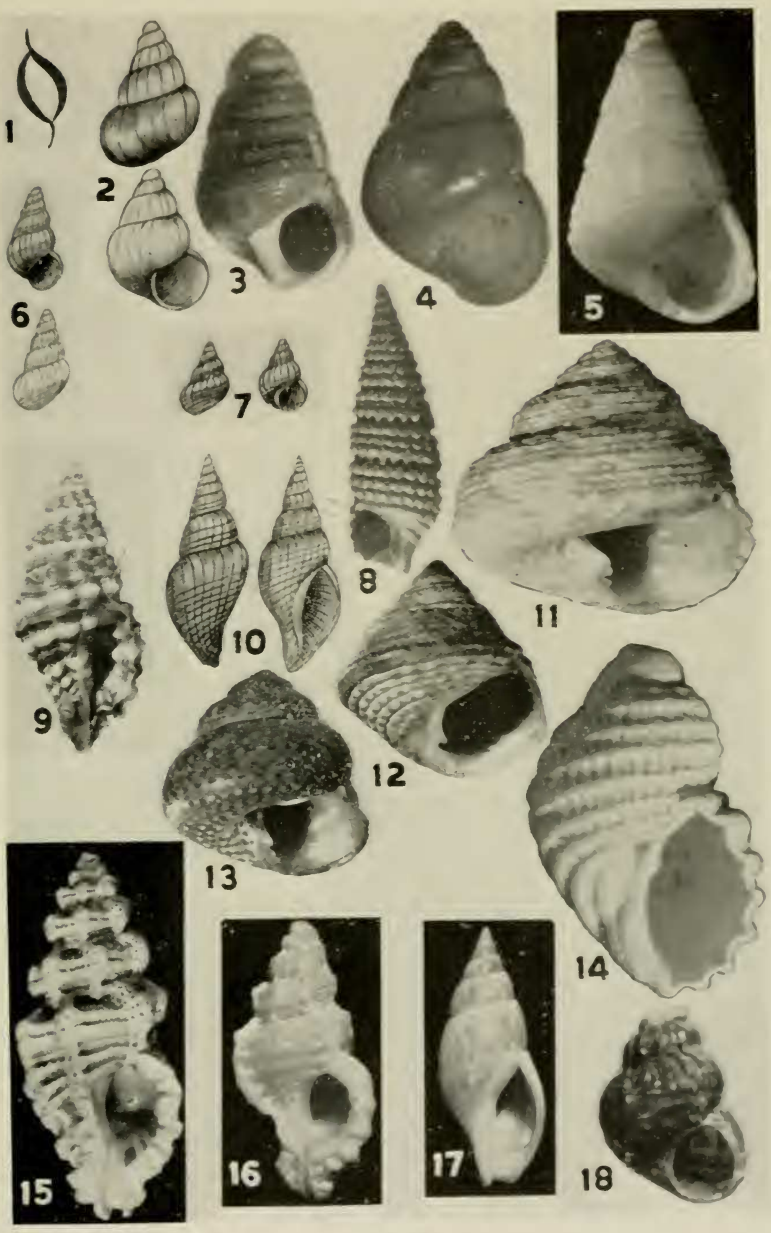

Plate 39

Plate 40

Fig. 1. *Odostomia gemmulosa* Adams. Lectotype MCZ 186076 (15x).
Fig. 2. " *solidula* Adams. Lectotype MCZ 186037 (15x).
Fig. 3. " *canaliculata* Adams. Lectotype MCZ 186101 (10x).
Fig. 4. " *ovuloides* Adams. Lectotype MCZ 186130 (about 10x).
Fig. 5. *Tornatella punctostriata* Adams. Holotype MCZ 155925 (7x).
Fig. 6. " *punctostriata* Adams (enlarged from original figure).
Fig. 7. *Trochus pulcher* Adams. Holotype MCZ 156356 (2½x).
Fig. 8. *Triton pulchellus* Adams. Holotype MCZ 186135 (about 2½x).
Fig. 9. *Turbo* (?) *pulchellus* Adams. Lectotype MCZ 156358 (about 10x).
Fig. 10. *Truncatella cumingii* Adams. Lectotype MCZ 177155 (6x).
Fig. 11. " *succinea* Adams. Lectotype MCZ 177154 (5x).
Fig. 12. *Triton parvus* Adams. Lectotype MCZ 177283 (2½x).
Fig. 13. *Trochus occidentalis* Mighels and Adams. Type lost (enlarged from original figure).
Fig. 14. *Turritella reticulata* Mighels and Adams. Paratype MCZ 185254 (about 2½x).
Fig. 15. *Turritella reticulata* Mighels and Adams (enlarged from original figure).
Fig. 16. *Turritella costulata* Mighels and Adams (enlarged from original figure). Idiotype MCZ 165598.
Fig. 17. *Truncatella modesta* Adams. Holotype MCZ 177152 (13x).

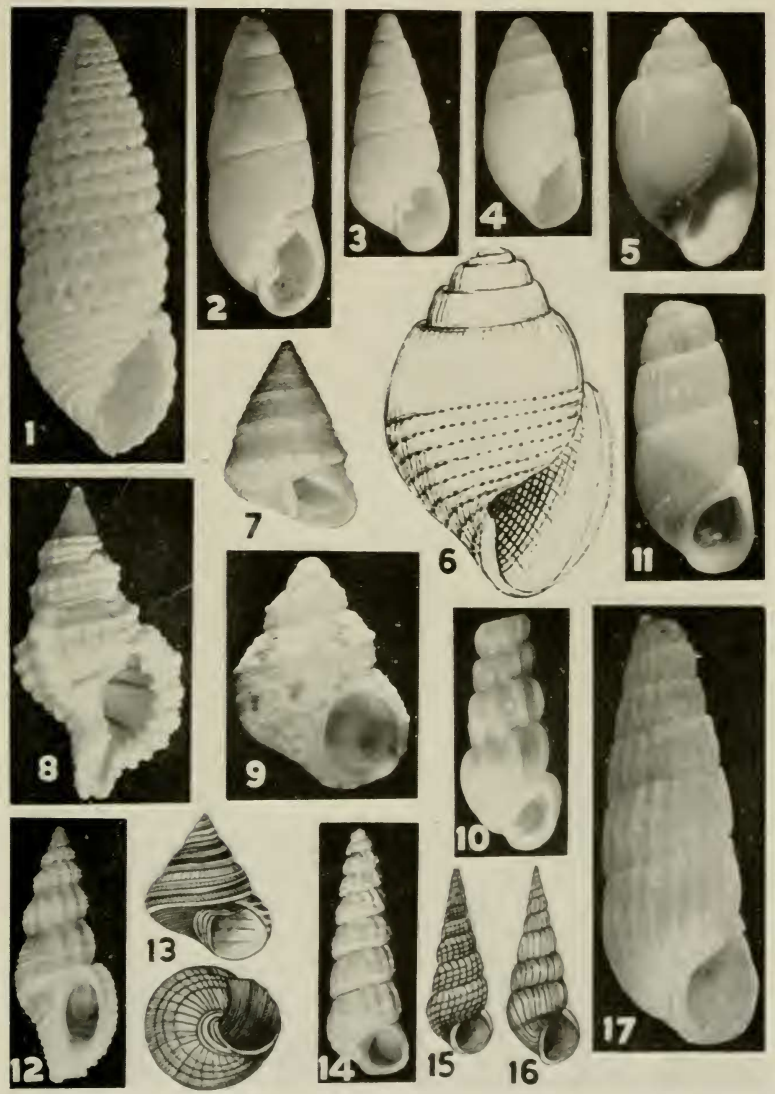

Plate 40

Plate 41

Fig. 1. *Columbella subcostulata* Adams. Lectotype MCZ 186039 (6x).
Fig. 2. " *fenestrata* Adams. Holotype MCZ 186009 (7x).
Fig. 3. " *costulata* Adams. Holotype MCZ 186108 (4x).
Fig. 4. " *ovuloides* Adams. Lectotype MCZ 177372 (about 2½x).
Fig. 5. *Jaminia seminuda* Adams. Lectotype MCZ 186052 (10x).
Fig. 6. " " " (enlarged from original figure).
Fig. 7. *Fissurella elongata* Adams. Lectotype MCZ 155533 (4x).
Fig. 8. *Jaminia producta* Adams. Lectotype MCZ 156158 (7x).
Fig. 9. " " " (enlarged from original figure).
Fig. 10. *Nerita praecognita* Adams. Lectotype MCZ 186194 (slightly enlarged).
Fig. 11. *Natica jamaicensis* Adams. Lectotype MCZ 156166 (3x).
Fig. 12. " *gouldii* Adams. Lectotype MCZ 151080 (about 1½x).
Fig. 13. " *proxima* Adams. Lectotype MCZ 155931 (about 2x).
Fig. 14. *Pedipes ovalis* Adams. Lectotype MCZ 177349 (8x).

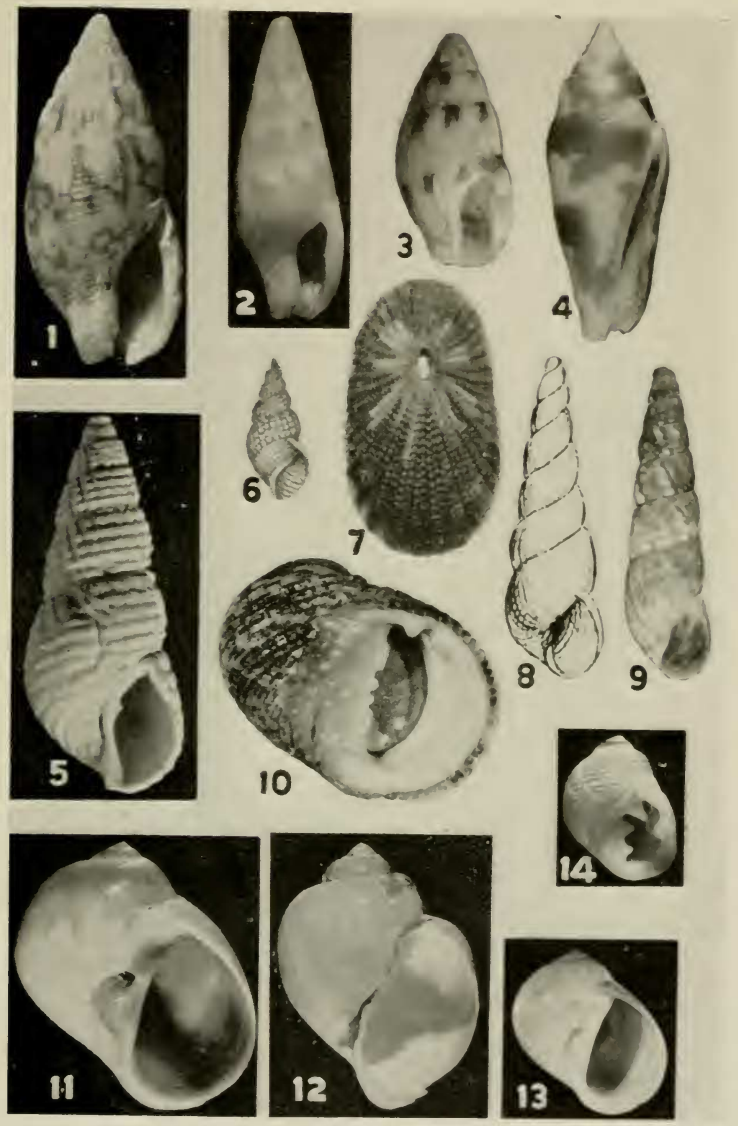

Plate 41

Plate 42

Fig. 1. *Chiton squamulosus* Adams. Lectotype MCZ 186080 (2x).
Fig. 2. " *purpurascens* Adams. Holotype MCZ 155962 (3x).
Fig. 3. " *multicostatus* Adams. Lectotype USNM 64425 (2x).
Fig. 4. " *papillosus* Adams. Lectotype MCZ 186100 (5x).
Fig. 5. " *erythronotus* Adams. Holotype MCZ 155960 (about 2½x).
Fig. 6. *Chiton mendicarius* Mighels and Adams. Type lost (enlarged from original figure).
Fig. 7. *Chiton squalidus* Adams. Lectotype MCZ 186099 (natural size).
Fig. 8. " *costatus* Adams. Holotype MCZ 156026 (about natural size).

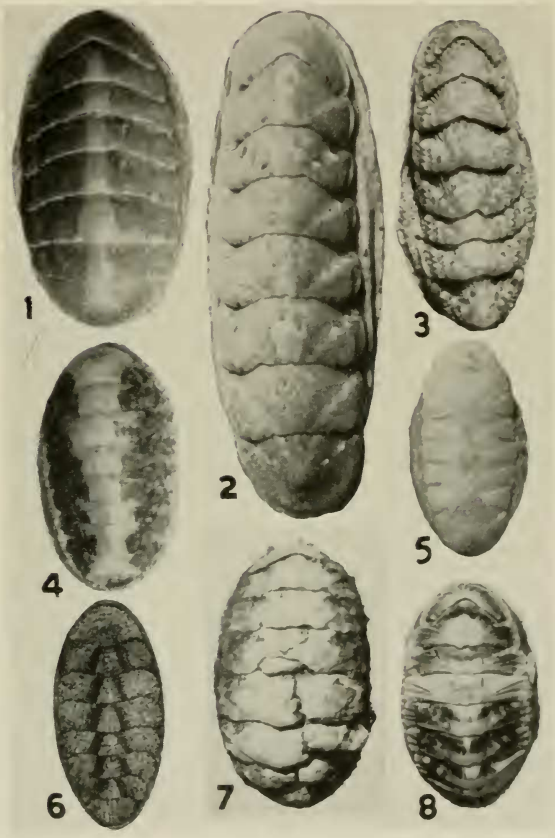

Plate 42

Plate 43

Fig. 1–2. *Arca tenera* Adams. Lectotype MCZ 177060 (2½x).
Fig. 3–4. *Amphidesma jayanum* Adams. Lectotype MCZ 186109 (slightly enlarged).
Fig. 5. *Thracia truncata* Mighels and Adams (enlarged from original figure).
Fig. 6–7. *Thracia truncata* Mighels and Adams. Lectotype MCZ 165595 (3x).
Fig. 8–9. *Lima pellucida* Adams. Lectotype MCZ 155585 (3x).

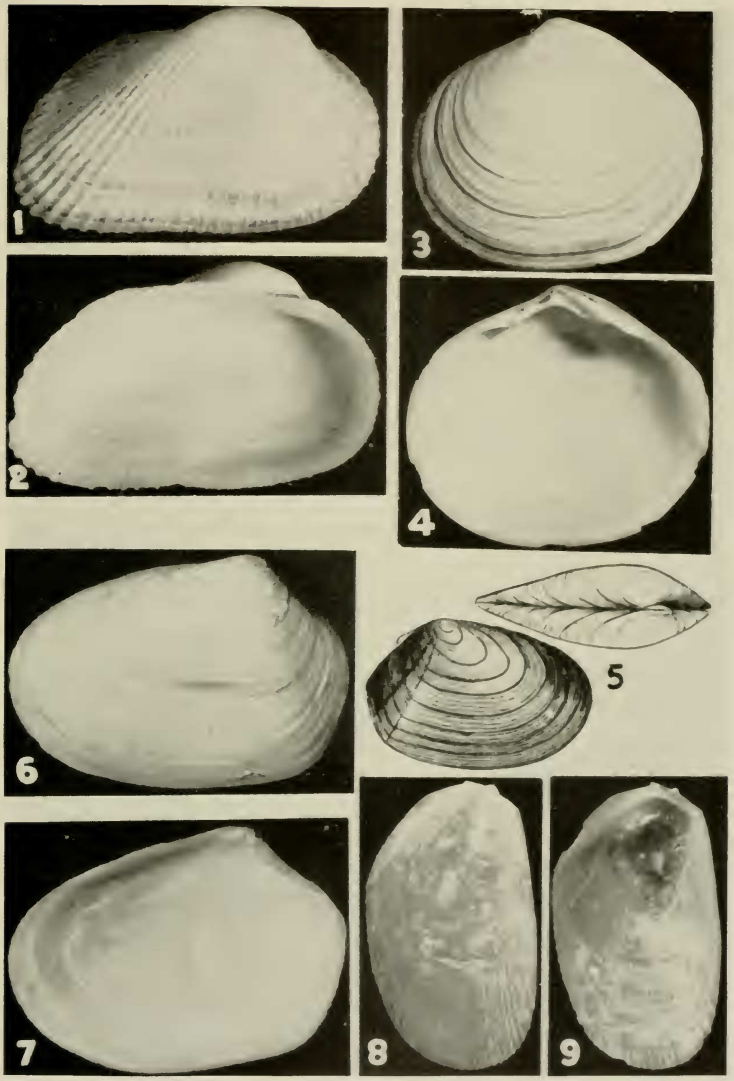

Plate 43

Plate 44

Fig. 1–2. *Tellina decussatula* Adams. Lectotype MCZ 156459 (2¼x).
Fig. 3–4. " *nitens* Adams. Holotype MCZ 155606 (3x).
Fig. 5–6. *Thetis parva* Adams. Paratype USNM 64072 (8½x).
[Lectotype MCZ 186267. The original lot of C. B. Adams was misfiled and was not located until after the plate had been made up so we give only the MCZ number here].
Fig. 7–8. *Thetis cerina* Adams. Lectotype MCZ 155584 (2½x).
Fig. 9. *Pecten tenuicostatus* Mighels and Adams. Type lost (enlarged from original figure).

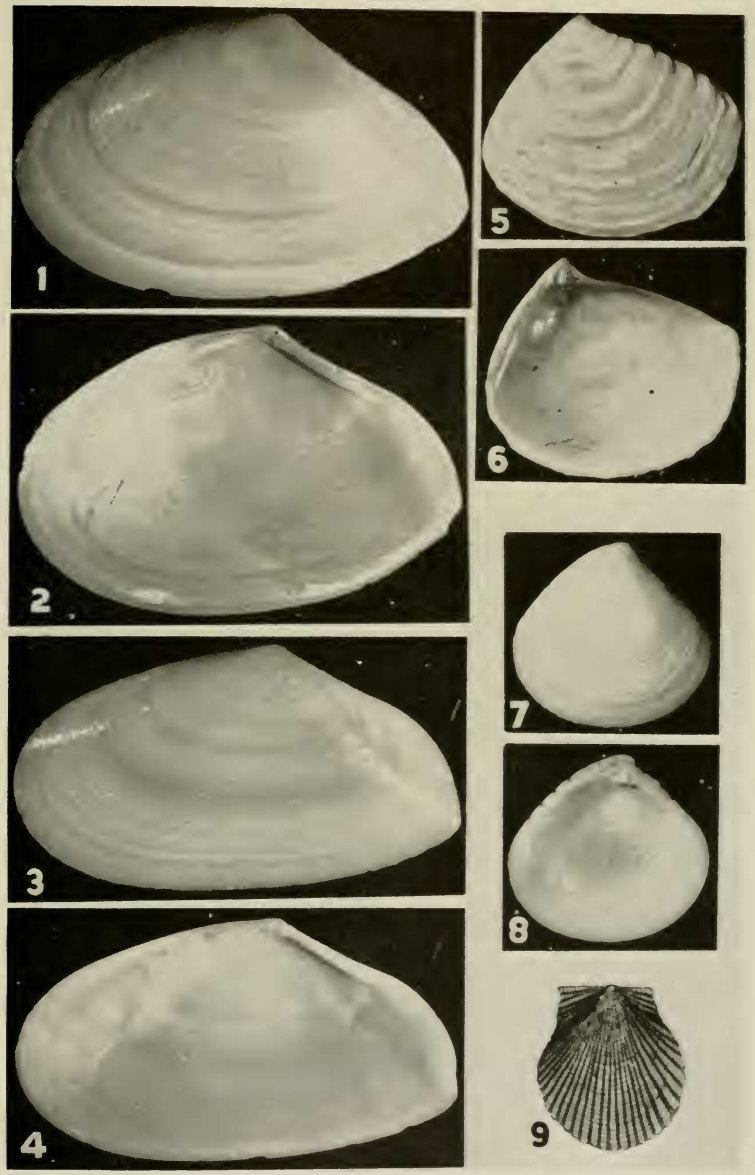

Plate 44

Plate 45

Fig. 1–2. *Psammobia purpureo-maculata* Adams. Lectotype MCZ 186069 (2x).
Fig. 3–4. " *cerina* Adams. Holotype MCZ 177057 (3x).
Fig. 5–6. " *biradiata* Adams. Holotype MCZ 177056 (2x).
Fig. 7. " *affinis* Adams. Holotype MCZ 186074 (2x).
Fig. 8. *Nucula delphinodonta* Mighels and Adams (enlarged from original figure).
Fig. 9. *Nucula delphinodonta* Mighels and Adams. Lectotype MCZ 176984 (8x).
Fig. 10. *Nucula antiqua* Mighels and Adams. Type lost (enlarged from original figure).
Fig. 11–12. *Lucina soror* Adams. Lectotype MCZ 177059 (2x).
Fig. 13. *Nucula cascoensis* Mighels and Adams. Type lost (enlarged from original figure).
Fig. 14. *Thracia inequalis* Adams. Type lost (enlarged from original figure).

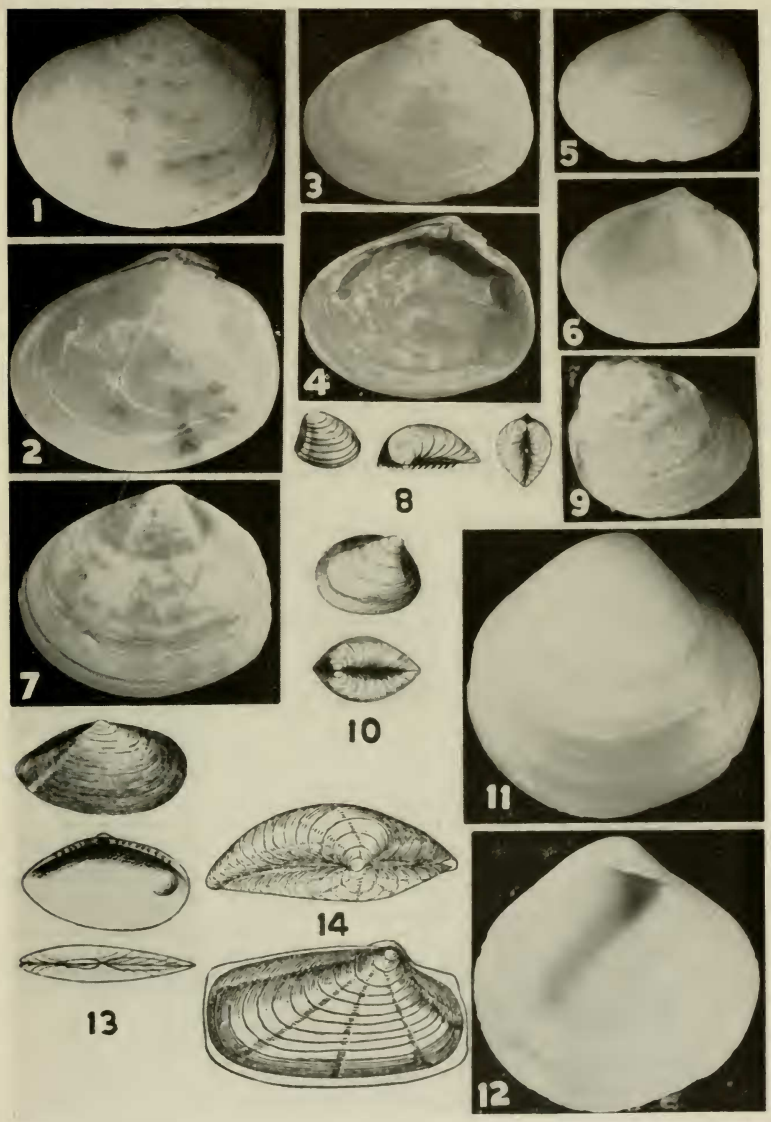

Plate 45

Plate 46

Fig. 1–2. *Lucina americana* Adams. Holotype MCZ 177064 (2x).
Fig. 3–4. " *granulosa* Adams. Lectotype MCZ 155587 (2½x).
Fig. 5–6. " *pectinata* Adams. Lectotype MCZ 155996 (2x).
Fig. 7–8. " *imbricatula* Adams. Idiotype MCZ 177018 (slightly enlarged) from St. Johns, Virgin Islands.
Fig. 9–10. *Lucina pectinella* Adams. Lectotype MCZ 155597 (about 3½x).
Fig. 11–12. " *pilula* Adams. Lectotype MCZ 177058 (about 2x).

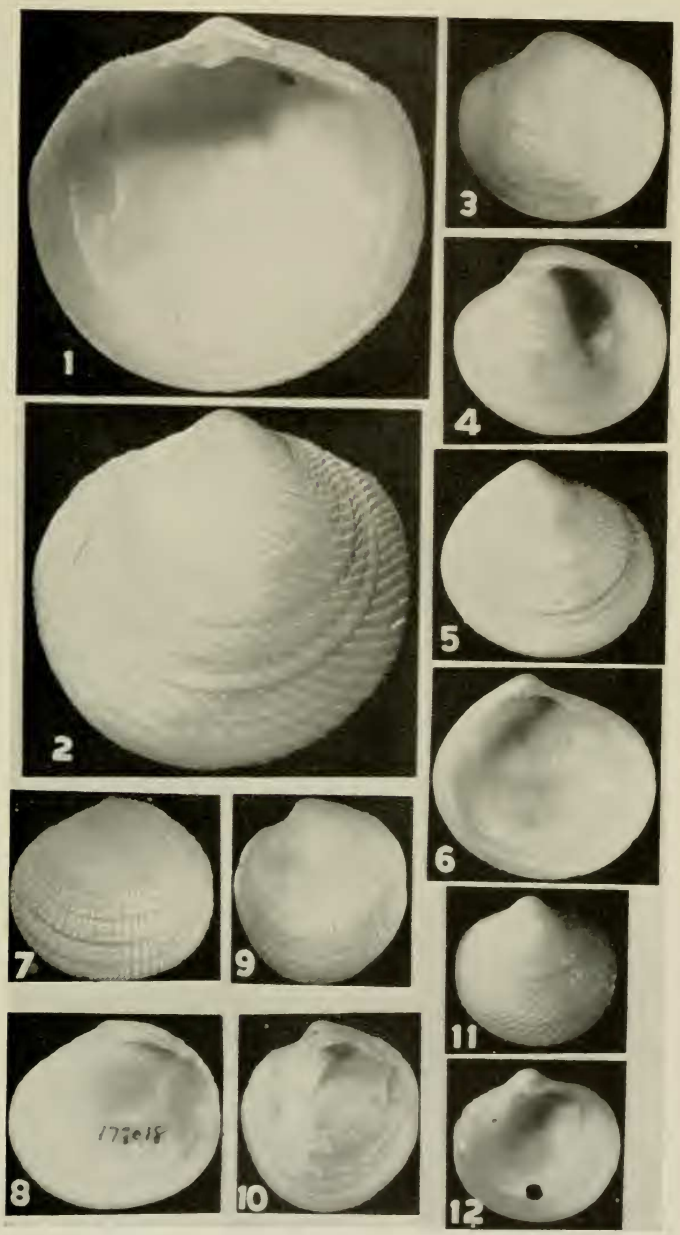

Plate 46

Plate 47

Fig. 1. *Corbula kjoeriana* Adams. Lectotype MCZ 186105 (3x).
Fig. 2. " " " Paratype MCZ 155603 (3x).
Fig. 3–4. " *blandiana* Adams. Lectotype MCZ 177062 (3x).
Fig. 5–6. " *dietziana* Adams. Lectotype MCZ 155604 (3x).
Fig. 7. " *barrattiana* Adams. Lectotype MCZ 186107 (3x).
Fig. 8. " " " Paratype MCZ 155605 (3x).
Fig. 9. " *newtoniana* Adams. Lectotype MCZ 177063 (2½x).
Fig. 10. " " " Paratype MCZ 155607 (2½x).
Fig. 11. " *knoxiana* Adams. Lectotype MCZ 186106 (2½x).
Fig. 12. " " " Paratype MCZ 155608 (2½x).
Fig. 13. " *fulva* Adams. Holotype MCZ 155609 (3x).

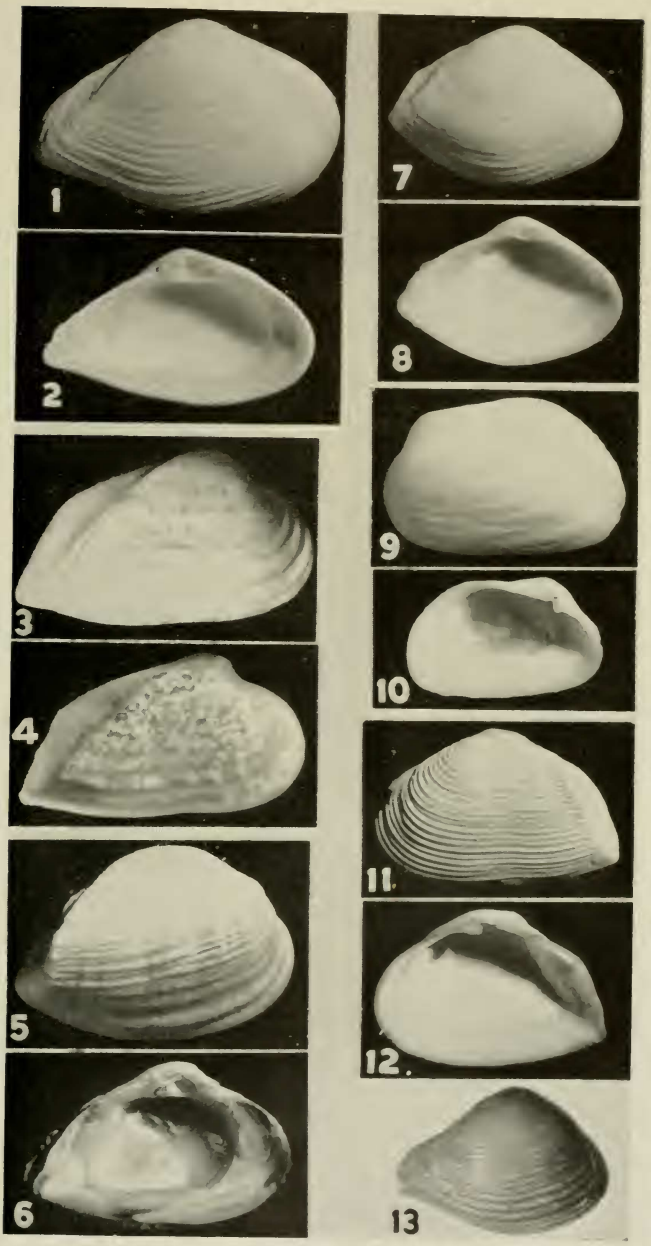

Plate 47

Plate 48

Fig. 1. *Corbula swiftiana* Adams. Lectotype MCZ 186103 (3x).
Fig. 2. " " " Paratype MCZ 155602 (3x).
Fig. 3. " *krebsiana* Adams. Lectotype MCZ 155611 (4x).
Fig. 4–5. " *chittyana* Adams. Lectotype MCZ 177065 (3x).
Fig. 6–7. *Perna bicolor* Adams. Lectotype MCZ 186081 (2x).
Fig. 8–9. *Cardita ovata* Adams. Holotype MCZ 155984 (2x).

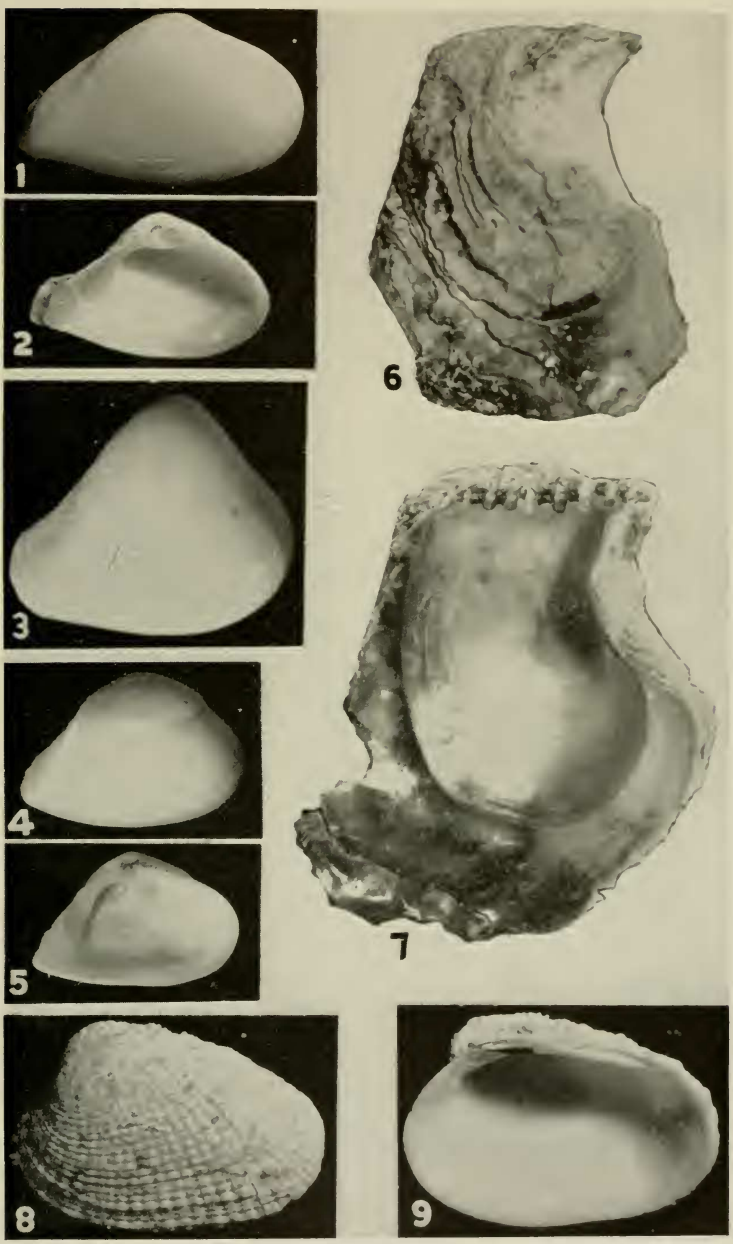

Plate 48

Plate 49

Fig. 1. *Pleurotoma candidissima* Adams (greatly enlarged to show sculpture). (See also Plate 30, fig. 2.)
Fig. 2. *Pleurotoma albida* Adams (greatly enlarged to show sculpture). (See also Plate 30, fig. 5.)
Fig. 3. *Chemnitzia levis* Adams. Lectotype USNM 94806 (about 8½x).
Fig. 4. " " " Paratype USNM 90614 (13x).
Fig. 5. *Pleurotoma trilineata* (greatly enlarged to show sculpture). (See also Plate 29, fig. 15.)
Fig. 6. *Scalaria modesta* Adams. Lectotype MCZ 186168 (about 8x).
Fig. 7. *Chemnitzia multicostata* Adams. Lectotype USNM 90612 (13x).
Fig. 8. " *flavocincta* Adams. Lectotype USNM 90613 (13x).
Fig. 9. *Pedipes globulosus* Adams. Lectotype MCZ 177347 (5x).
Fig. 10. *Truncatella gouldii* 'Adams' Pfeiffer. Cotype MCZ 177113 (5x).

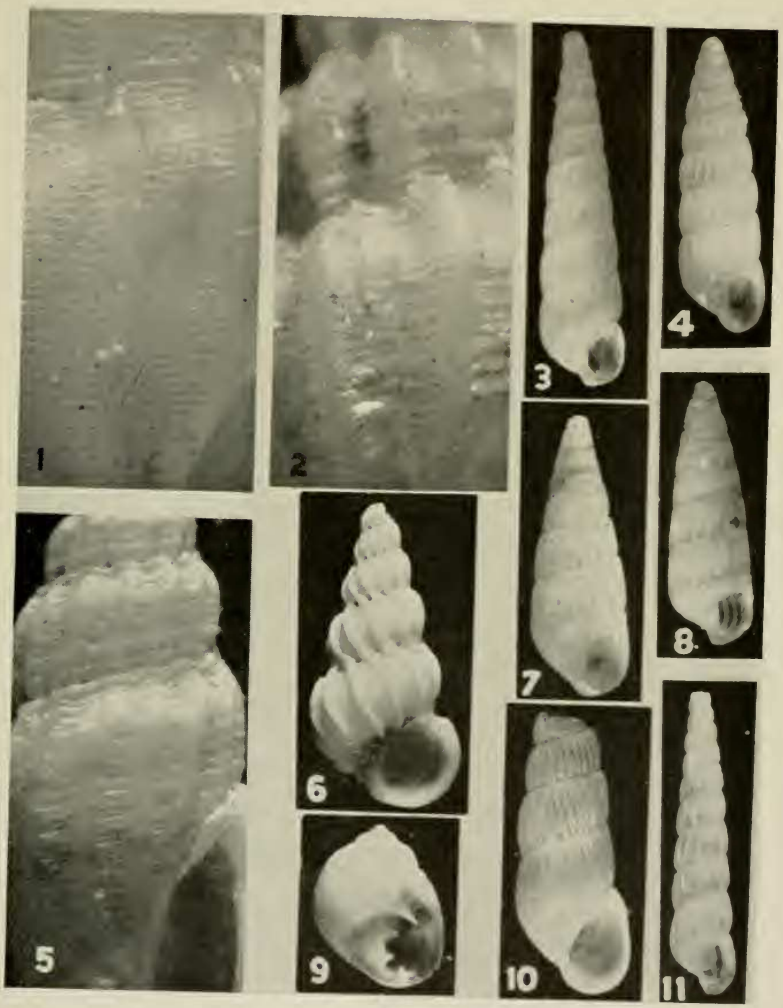

Plate 49